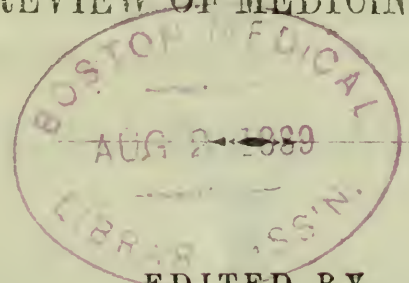
THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW OF MEDICINE AND SURGERY



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THE MEDICAL INDEPENDENT

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MONTHLY REVIEW.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links connecting the Vegetable and Animal Kingdoms.—Continued. By HENRY GOADBY, M.D., F.L.S.

This tomb was exposed by Belzoni, who brought to England, and placed in the British Museum, the sadly crumbling Sarcophagus, containing the equally crumbling remains of a Monarch, who had given laws to the whole civilized world, *upwards of five thousand years ago!* Such is the date as recorded in the papyrus, and rendered by those skilled in decyphering Egyptian hieroglyphics.* The mind is lost in the contemplation of such a theme as this! We feel carried back to a period antecedent to the great flood, and while we linger beside this unprecedentedly venerable remain of humanity, as times and oft we have done, we seem to realize in such a presence all the early events of the world, and ponder over the sins and iniquities of a people so grave, as to provoke the wrath of God!

Our specimen of "fine linen," is as fresh, and as white as though it came from the loom but yesterday; examined by the microscope, it proves to be much finer than a linen pocket handkerchief, we usually carry.

*There is in the Museum of the Vatican at Rome the mummy of a man, acknowledged to have been contemporary with Abraham.

But while the Sarcophagus is broken, and the body it contained despite the conservative process of embalming, is just crumbling to decay, the *woody fibre of the flax*, and the papyrus, are uninjured! Thus it would appear that Lignine is nearly, or quite indestructible.

To this layer of cloth, placed in contact with the body, succeeded a *coarser layer*, slightly impregnated with bitumen; in like manner, this wrapper was followed by a still coarser, and so it continued, until the external layer was almost as coarse as a sack. Meanwhile the quantity of bitumen contained in the cloth kept pace with its increase in coarseness, till in the outer layers, thorough saturation was effected.

It is a very remarkable fact that, whilst the Egyptians were well acquainted with flax, they do not appear to have known anything of *cotton fibre*, since it does not occur in any fabric of Egyptian manufacture. On the other hand, the ancient Peruvians knew all about cotton, and employed it extensively, but were altogether unacquainted with flax, hence, Peruvian Mummy cloth, is found to be entirely cotton—while Egyptian Mummy cloth is entirely linen. The characters which distinguish these vegetable tissues, and by means of which each may be known from the other, are given in the accompanying figure.

Fig. 57.

Flax, [letter A, fig. 57] is a solid cylinder, provided with a great number of joints, at short intervals like a bamboo cane. Cotton, [B] is not *woody fibre* at all, but simply a long, delicate hair of the plant that bears it. In texture, this hair is thin, and transparent, originally filled, (or nearly so) with a fluid; in drying, this fluid becomes obliterated, and the wall of the long and slender cell, unable to maintain its integrity, collapses—falls to, and coalesces—in this state it prepares to dry like a thin ribbon.

But simultaneously with the drying, it begins *to twist*, and this continues interminably, from one end of the hair, to the other. So that, under the microscope, flax is known by its solidity, and many joints, and cotton by its flat, and twisted character.

The flatness of the cotton, however, is not perfect; the sides at their edges, refuse to succumb. Now, as a principle of mechanics we know that, it is impossible to make a *hollow cylinder flat*; success may be attained for the greater part of the structure, but a small quantity of air will be compressed at the sides, which will resist any mechanical violence, and nothing short of splitting the tube in this direction can possibly ensure approximation: so the *edges* of the cotton fibre always present a thickened appearance.

The subject of woody fibre, and its developement, is a very interesting one; a fruit of one species of Palm, the Nut Ivory, (Phytelephas macrocarpa) is peculiar, and seen in section of great beauty, by the microscope. When first gathered, and for a short time after, it appears like a mass of *condensed albumen*: so soft is it, at this period, that very thin sections of it may be easily cut with a pen-knife. After exposure to the atmosphere, and consequent inspissation, it becomes so *hard*, that it is even difficult to cut it with a saw, and in this state it is readily turned in a lathe. When cut, the slice must be ground down until thin enough to transmit light freely, and then mounted as a preparation.

Examined by the microscope, we find the lignine in a *semi* or *pseudo* condition of developement, exhibiting, at the same time, a true *vesicular* character. Figure 58 exhibits the micro-

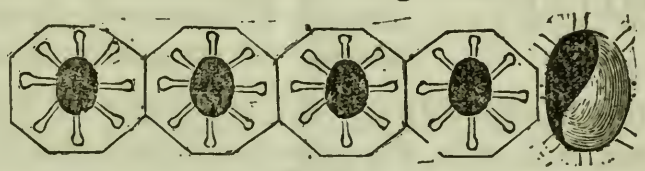

Fig. 58.

scopical appearance of this tissue, it will be seen that the central dark parts are surrounded by radii of a peculiar character, especially as regards their terminal portion, which is expanded. That these central dark parts are vesicular is made fully apparent in the last portion of the figure, which exhibits a greatly enlarged view of the central portion, *ground a little too thin*, whereby its vesicular character is displayed: the radii are tubular also.

The upper cuticle of the petal of Pelargonium (Variegated Geranium) offers a charming display of well-developed lignine

in cells. (See Fig. 59.) Here the cells are well formed, but irregular in size: whilst the black color of the radiating woody fibre, contrasts most beautifully with the rich crimson, forming the color of the petal. The external margins of the cells, too, are slightly scalloped, which adds greatly to the general effect. Woody fibre meets us in other, and very curious situations; for example, in the midst of the pulpcells of certain fruits. In eating a pear, or a quince, our teeth come in contact with remarkably dense, but very miuute particles of a *gritty* character, especially as we approach the centre of the fruit, or *core*.

Fig. 59.

Hence this structure is called emphatically the *gritty tissue*. This structure is shown in fig. 60, where *a a* represents the pulp cells of the fruit, and the gritty tissue is represented by *b*.

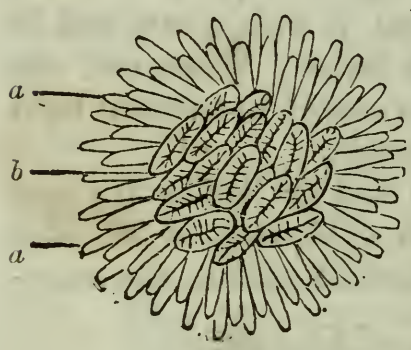

Fig. 60.

This tissue, (in the Pear and Quince) consists of isolated particles of lignine, of considerable density; and although grouped together in masses of greater or less dimensions, are yet distinct and separate. The nearer we approach the core, the larger and more frequently are the groupings of woody fibre; the more remote from it, the masses are much less in size, and sparsely scattered.

The intention of exhibiting this structure in such a situation, seems to be to give protection to the seeds; it appears like a foreshadowing of that superior conservation of these important germs, which attains its highest developement in the Cherry, Peach, Plum, &c.

If we make a thin section of the cherry, peach, or plum stone, and grind them sufficiently thin, we shall find such general uniformity, that, although they possess specific differences, one illustration will suffice for them all.

Fig. 61.

Thus fig. 61 gives the microscopic view of a section of cherry stone. In this, as in former illustrations, we see the well-defined cells, each containing what appears to be a *nucleus* surrounded by radiating lines. This suructure is ligneous—woody fibre, and presents much general resemblance to structures that have preceded it. The central portion is decidedly *vesicular*, as shown in many parts of the preparation from which the figure was obtained, in those portions which, being ground too thin, have laid open the cavity: in all probability, too, the radiating lines are *tubes*.

We would now pause, and see what analogy this, and kindred structures offers to command our attention. In the description, and illustrations of human bone, we saw its structure composed of *vescicles*, and *small tubes*; do we not find a tissue strictly analagous in the selerogen of plants?

So closely is this tissue of plants, allied to the kindred tissue in animals, that they appear to be separated only by two small points of difference, *i. e.*, the vegetable tissue presents a series of well formed cells, which are absent in the bone, and in the plant, the radii are confined *within* the cells respectively, whereas the caniliculi of bone *freely inosculate*.

The shells of the various nuts also present the like general characteristics, but their individuality is always maintained by slight specific differences. One nut, however, offers a speciality apposite to our purpose. If a section be made of the Coquilla nut, in the direction of the diameter of its cells, we shall find on examination per microscope a closer approximation to the intimate structure of bone, than seen in any structure yet examined. We think it scarcely possible to find two tissues, the one vegetable, and the other animal, more closely resembling each other, than this figure, (fig. 62,) and the ultimate structure and arrangement of human bone cells, as shown at fig. 54.

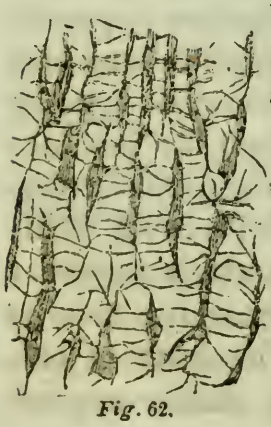
Fig. 62.

We must now pass to another, and important part of our subject, viz: mineral matter, other than carbonate of lime, in the tissues of organized beings, viz: *Silica*.

As plants were formed prior to the existence of animals, they necessarily claim precedence

at our hands, and it is expedient therefore to seek out and illustrate some of the prominent tissues in which this peculiar, and intractable material, is commonly found.

In the present state of our knowledge of the structure of plants, it is fair to say that silica is more abundantly produced in plants of *lowly*, than in those of *high* organization. Thus the *grasses*, which are a lowly tribe of plants, abound in this mineral. In the cereal grains, it forms a very important element of their constitution, thus: we see wheat, oats, rye, barley, &c., attain a great elevation from the earth, presenting slender, but perpendicular stems, surmounted by a heavy ear of grain. It matters not, how much they may be agitated by the stormy winds of Heaven, they succumb by waving to and fro, and return to their erect position, and nothing short of a hurricane of wind has power to break them down. How is this? It may be answered that the mechanical figure of the stem (stalk) satisfactorily accounts for this phenomenon—a short, hollow tube offering the greatest resistauce to external pressure. As far as it goes, this is true enough, but there is yet in the stalk another element of strength, too generally overlooked, namely: it is found to be composed of a many jointed layer of flint, always presenting *two* distinct elements.

Take the husk (chaff) of rye, place it in strong nitric acid, and boil it for five or six hours, to destroy all the organic cells; wash the residuum frequently with distilled, or soft water, and submit the product to the microscope, when a structure represented in fig. 63 will become apparent. In this tissue we perceive long bars of flint *b b*, with serrated edges, by which they lock into, or interlace with each other; these are connected at either end with ovoid particles of flint, *a a*, which represent the stomata, or breathing mouths of the plant. The husk of oat, fig. 64, presénts a similar appear-

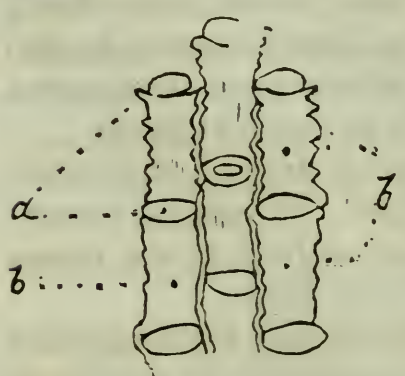

Fig. 63.

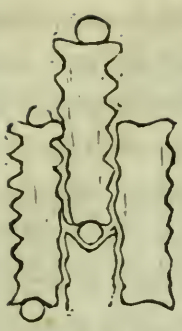

Fig. 64.

ance, but smaller in size, whilst the like structure as seen in the husk of wheat, is shown at fig 65; in this last, the indentations of the edges are more than usually decided, and the structure, as seen by the same magnifying power is minute.

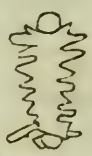

Fig 65.

The husk of rice presents a somewhat different character as seen in fig. 66. The long bars are more than usually compact, containing within them a wavy line, with nucleated cells; moreover, in place of stomata, we have merely a septum dividing one bar from another. In all these tissues it is easy to disintegrate them, by boiling in acid too long continued, in which case the elements described are completely separated.

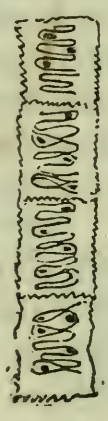

Fig. 66.

Grasses, other than the cereals present, when properly prepared, very beautiful illustrations. Amongs, these may be mentioned the Equisetum hyemale, Dutch rush, or scouring rush.

This plant possessed for many years, great economic value; its capabilities for abrading surfaces, was extensively employed by the cabinet maker to smooth his work preparatory to polishing it—it is no longer used for this purpose, however, since the introduction of *glass paper* of various degrees of fineness. But it is still used by plaster figure makers, to remove the lines, or seams, formed by the junction of their piece moulds.

To use it, (to plaster) it is only necessary to hold a piece of the rush in the hand, and draw it lightly over the surface of the plaster to be filed, when it will be seen to cut with incredible rapidity.

The cause of this remarkable power is to be found in its *flinty* cuticle, which is peculiar, and singularly beautiful.

A representation of the flinty surface of this plant is given at 67.

It will be seen that the greater part of the surface is occupied by a cast (as it were) in flint, of a continuous tissue formed

entirely of *nucleated* cells ; the exceptions to this structure are to be found at either end of the figure, and present two large circular spaces, each having an irregular opening, and within, and *beneath* the openings, appear a pair of lips, of a peculiar shape, possessing serratures at the points of approximation—these are the *breathing mouths*, (stomata.)

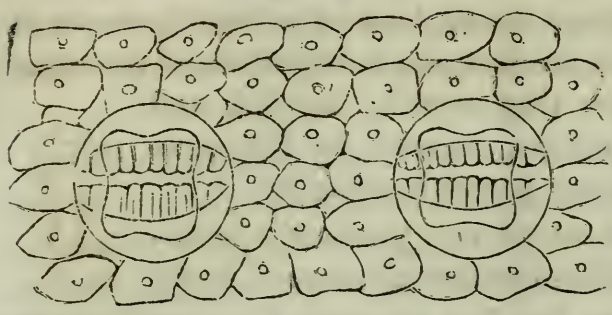

Fig. 67.

As regards this last mentioned structure, this plant appears to stand alone ; we know of no other instance in the vegetable kingdom of the breathing mouths being *doubled.* The circular mouths appear to be *internal*, whereas the elongated stomata with the serrated edges are *external*, with their long axes disposed in the direction of the long axis of the plant.

There must evidently be some great necessity which this plant has to regulate, with more than ordinary precision the ingress and egress of air, and hence the *doubling* of a most important structure conferred upon all plants ; we do not know, however, in what that necessity consists.

The cuticle of the bull-rush is very curious ; between two rows of cells, each consisting of four cells arranged in linear (perpendicular) series, and remarkable for their uniformity, is a layer of cells somewhat larger in size, lighter in substance, and conspicuous for their irregularity, they are all nucleated.

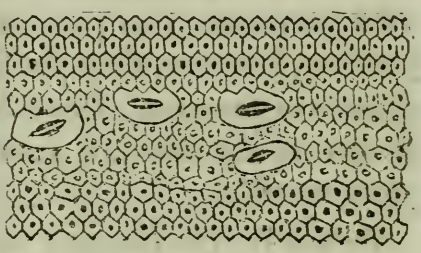

Fig. 68.

In, and amongst the middle, irregular layers, very large cells will be found, each of which contains a stoma.

Silica, as shown by the foregoing illustrations, greatly abounds in the grasses ; from the quantity of this mineral found in Reeds, they are said, during hurricanes in warm climates, to have caused extensive conflagrations by striking against each other.

But Silica is not confined to the grasses, it enters into the composition of all plants—from the lowest to the highest—its situation being, however, exceedingly various. In many trees the bark, in others the cuticle of the leaves, is the seat of this mineral.

In the latter case, it usually exists, not in a continuous layer spread over the entire surface, but in the form of *spiculæ* or hairs. As an illustration of this fact, we direct attention to a shrub as common in the gardens of this Country, as in Europe, viz: Deutzia scabra, [it has no common name.] If the *upper* surface of a leaf of this plant be examined by the microscope, a number of [comparatively] large spiculæ, of a stellate form will be seen: they will be found to present from 3, to 6 radii, both of which are rare, as compared with spiculæ of 4 and 5 radii, which are by far the most abundant. We have shown the latter in figures 69 and 70. If these figures be carefully examined, a number of angular particles will be seen on them, in addition to an internal structure of flint. Let us now *reverse* the leaf, and examine the cuticle on the *under* surface. See figure 71. Here we find a very dense mass of spiculæ, in contradistinction to spiculæ sparsely developed, and widely scattered, such as is displayed upon the upper cuticle; neither is this all: whilst, as we have seen, the radii do not exceed 6, on the upper cuticle, here they consist from 10 to 13. Moreover, whilst those on the upper cuticle are *large*, these are quite minute: both cuticles present an extremely interesting spectacle.

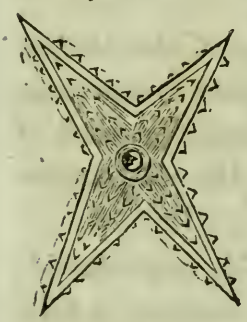

Fig. 69.

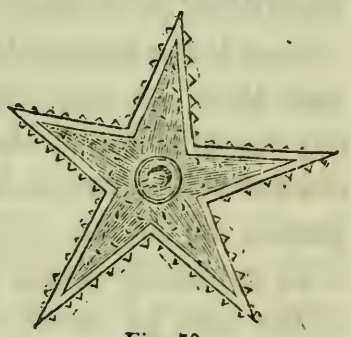

Fig. 70.

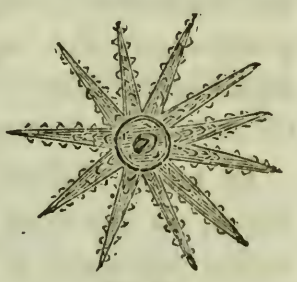

Fig. 71.

We are not aware that the leaves of Deutzia have any economic value, save that [in this country as we have been informed] servant maids use them to polish their tin wares with, for which purpose they must be well adapted.

ARTICLE II.—Initiatory Trance.

This, the most protean form, constitutes the third, and last division of Trance-sleep; Death-trance and Trance-coma, being the other two divisions.

Mental impressions are greatly responsible for the production of *any form of trance*, particularly the lower varieties, such, for example, as the form we now intend to illustrate, and the two divisions of Waking-trance: the *higher* forms appear to be more under the control of *physical causes.*

Trance sleep is characteristic of two conditions,—*complete* insensibility—with vivid and coherent dreams; in Initiatory trance, however, the insensibility is by no means generally apparent, on the contrary, the patient, or victim of it appears to ordinary observers, to be perfectly awake and conscious, but merely *odd in manner.*

Such is the remarkable intensity and connection of the dream, that it is not only difficult, but almost impossible to convince any one so afflicted, that the occurrencies he simply dreamed of did not take place in his presence, and that he did not participate in the action.

In Initiatory trance the joints are neither rigid, nor relaxed; if the arm be raised, or elbow bent, a *slight resistance* is felt, and immediately after, the limb is usually restored to its original position: at the same time, it occasionally happens that Cataleptic immobility, or Catochus even, may co-exist with this form of trance, so insensibly do they glide into each other.

In many distinct periods of the world's history—in ancient times, no less than in our own day—much excitement has prevailed amongst a section of the people, on the subject of Religion; these have invariably been accompanied by certain disorders of the nervous system, (themselves infectious and contagious) which have, however, been interpreted as the immediate visitation of the Holy Spirit. There could not have been a greater delusion than such interpretation! The effects produced were the *phenomena of trance*—the physiological consequences of the prevailing excitement.

We need not ransack the pages of remote history, nor travel

to distant lands for illustrations, they are to be found at home; the "Revival" meetings of modern times, as recorded by those who conducted them, furnish instances quite as remarkable as any that have been described.

In the "Zion Watchman," published in the City of N. Y., for Oct. 2, 1842, Mr. Le Roi Sunderland, himself a preacher, gives a most interesting account of the proceedings at Camp Meetings, the philosophy of which he does not seem to understand. We cannot afford space for lengthy extracts.

He says:—"I have seen persons" lose "their strength," as it is called at camp meeting and at other places of great religious excitement; and not pious people alone, but those also who were not professors of religion. In the spring of 1842 while performing pastoral labor in Dennis, Mass., I saw more than twenty affected in this way. Two young men of the name of Crowell, came one day to a prayer meeting; they were quite indifferent, I conversed with them freely, but they showed no signs of penitence. From the meeting they went to their shop, (they were shoemakers) to finish some work before going to the meeting in the evening; on seating themselves they were both struck *perfectly stiff.** I was immediately sent for, and found them sitting *paralyzed on their benches*, with their work in their laps, unable to get up or move at all. I have seen *scores of persons* affected the same way; I have seen persons *lie in this state* 48 *hours.*

At such times they are unable to converse, and are sometimes unconscious of what is passing around them, "at the same time they say that they are in *a happy state of mind.*"

Another extract from the same journal, gives a description of a more remarkable form of nervous seizure, (arising from similar causes) as it was manifested, at the great revival meeting, some forty years ago, in Kentucky and Tennessee.

"The convulsions were commonly called "the jerks.

At first appearance these meetings exhibited nothing to the spectator but a scene of confusion that could scarcely be put into language. They were generally opened with a sermon, near the close of which there would be an unusual outcry, some bursting out into loud ejaculations of prayer, &c.

*The Italics are our own.

The rolling exercise consisted in being cast down in a violent manner, doubled with the head and feet together in a prostrate manner, turning swiftly over like a dog. Nothing in nature could better represent the jerks than for one to goad another alternately on every side with a piece of red hot iron. The exercise commonly began in the head which would fly backwards and forward, and from side, to side with a quick jolt, which the person would naturally labor to suppress, but in vain. He must necessarily go on as he was stimulated, whether with a violent dash on the ground, and bounce from place to place like a foot-ball, or hopping round with head, limbs, and trunk twitching and jolting in every direction, as if they must inevitably fly as under.

In corroboration we append an extract from "Dow's Journal." In 1805 he preached in Knoxville, Tennessee, before the Governor, when some hundred and fifty persons, among whom were a number of Quakers, had the jerks. "I have seen says the writer," all denominations of religion exercised by the jerks—gentleman and lady, black and white, young and old without exception.

I passed a meeting house, where I observed that the under growth had been cut down for camp meetings, and from 50 to 100 saplings were left for people who were jerked to hold by. I observed where they had held on, they had kicked up the earth as a horse stamping flies.

Surely the doings of the "Spiritualists," although depending on this species, of trance for their phenomena, are nothing, compared with these results of fanaticism!

We have said that this is a changeable form of trance, and we now proceed to examine another phase of it.

During, and prior to the middle ages, sorceries and witchcraft were supposed to abound. None of the old countries of Europe were free from this delusion, and it is scarcely a century since the last witch was burned in this country.

The causes which led to a belief in any thing so unearthly, have hitherto been veiled in mystery; but we, in the present day, with a more extended philosophy to guide us, can have no difficulty in arriving at a just conclusion on the subject. That nothing should be wanting to assist our judgment, we have re-

corded in various instances, collected from every section of Europe, no less than in the United States, the remarkable *confession*, invariably made by the accused. With the stake staring them in the face, they were content to seal their own condemnation by deliberately acknowledging themselves to have committed *crimes* that were altogether impossible.

Can anything better illustrate the wonderful intensity, vividness and connection of the dreams of this kind of trance, than the history of the witches?

Living at a period when tales on this subject were related at every fire-side, is it strange that some temperaments should succumb to its influence, and that the dreaming of initiatory trance should wear the semblance of stern reality?

We have thus endeavored to portray some of the manifestations of this particular, and many-phased trance.

Time, with its changes, may, and doubless will, develop forms, of which, at this moment, the mind can have no conception. Spiritualism, like witchcraft, will have its day, and perish; unlike witchcraft. however, it cannot last so long, neither can its victims be so numerous.

We could have greatly extended our illustrations, without, however, improving the facts.

We now come to the physical considerations, connected with the phenomena of death trance.

The heart is usually assumed to be an involuntary muscle; that it is not altogethor so, is apparent from the influence of mental emotions on the circulation.

Still, however, it is somewhat difficult to obtain evidence sufficiently conclusive to settle the question, either pro or con.

In the details already given as illustrations of death trance, the capability possessed by some individuals of producing it spontaneously was dwelt on. The Fakirs, of India, were cited; but more especially the very remarkable case of Col. Townshend was described, to which might have been added the history of a Frenchman, who had educated himself to die, and in which state he could continue for three weeks.

Col. Townshand's account of himself is more satifactory, and reliable than anything on record in relation to this curious (but

dangerous) capability. He described the process of *dying spontaneously* as a very painful one; so much so that, after having offered the memorable exhibition to Dr. Cheyne, and others, as already described, he said he had no longer a motive to live; that these attempts were destroying him, and having made his will, he lay down once more, and *died in earnest*, as proved by the subsequent decomposition of his body.

This gentleman's case seems to prove incontestibly that the heart either is, or can be educated to become a *voluntary* muscle—a muscle every way obedient to the will. In the space of *half an hour* (and all accounts appear to agree in this respect) its motion can be made to cease—its functions entirely suspended and this cessation of circulation necessarily implicates the lungs, and uniform coldness of the body is the unfailing result.

In a scientific point of view, these experiments possess great interest, as tendiug to the demonstration of facts which, without them, would remain undeveloped.

We will see what the microscope does for this question. Of all tissues, the heart is by far the most difficult to manipulate with for microscopical examination. Its *compactness*, and *toughness* are quite remarkable; when, at length, the operator has succeeded, his instrument will reveal to him the peculiar *striped* fibre, characteristic of the muscle of animal life, or voluntary muscle, combined with the fibre of the muscles of organic life, or involuntary muscle. Hence, there appears to be no reason whatever, *structurally*, why the heart may not become a voluntary muscle. H. G.

New Mode of Treating Hydrocele.—Mr. Lloyd, at St. Bartholomews, often mentions to his class that the application he finds most effectual in private practice, in effecting the radical cure of hydrocele, is a small quantity of red precipitate on a probe or director, introduced into the sac subsequent to its evacuation by the trocar. In a recent case at St. Bartholomews, accordingly, the application was tried with very good effects. Mr. Lloyd believes it seldom or never fails. It requires no specific apparatus; it produces a certain amount of inflammation of the common kind in the serous lining of the sac, which effectually blocks up the cavity, and no ill effects of any kind are produced.—*N. Y. Journal of Medicine.*

ARTICLE III.—A Case of Epistaxis.

Mr. S——, aged about 50, of rather slender constitution, was attacked for the first time within his recollection, about 11 A. M., with Epistaxis. At first the hæmorrhage was slight but soon became alarmingly severe. In the free exercise of his predelections he had chosen *Hydropathy*, as the medical system on which he and his family were to depend for a "safe conduct" through all the ills and aches that might fall to their lot. In accordance with this choice deliberately made, having provided himself with a profuse supply of books and periodicals of the Præsnitzian faith, he had devoured their contents and made himself master of all the cold water appliances that the ingenuity of the Hydropathic craft had devised. Thus amply prepared he resolved to be his own Doctor, and put the system which had become his beau ideal to the test.

Nor would it be surprising if like the votaries of certain religious novelties, he had a desire to convince by a triumphant experiment his infidel neighbors, and especially a PHYSICIAN living within a little distance of his own house. The detail of his proceedure and the determination with which he pursued his plan almost to a fatal termination may perhaps be deemed confirmatory of the above suggestion.

The day was exceedingly warm, the atmosphere uncommonly dry, and his mode of treatment as follows: A large wash tub was provided and a servant ordered to fill it with water, drawn fresh from a deep well. This done, his feet and legs were placed in this exceedingly cold bath; next the shoulders were bared, and his wife instructed to pour the omnipotent panacea from a heighth of about two feet, over head, neck and shoulders, practically subjecting the entire surface to the influence of water at a temperature not many degrees above freezing. From about 12 M., to 6 P. M., these measures were without interruption vigorously executed. At first, for a short time, the hæmorrhage was considerably restrained though not completely suspended. This fact occasioned no inconsideable surprise, as well as chagrin, not only on the part of the patient and his wife who had concurred in the opinion that cold water thus learnedly applied constituted in the unequivocal sense of the expression,

the genuine "elixer of life," but also of the neighbors and friends, many of whom were more than half convinced of the miraculous power inherent in the system of the german wheelright. It was concluded therefore that the case was of unusual severity and the "system" must be persevered in, till its full curative efficacy was verrified, a doubt of its possible failure not being entertained. After a time, the hæmorrhage instead of continuing to be restrained became fearfully augmented, until as before said, 6 P. M:, when dispairing of success the neighboring physician was summoned to his aid.

On arrival, the Doctor finding the patient greatly prostrated, and alarmed for his safety, ordered the suspension of the *cold* water, and instead, substituted a pediluvium at a temperature as high as could be borne. At this juncture, syncope having ensued the hæmorrhage ceased, the horrizontal position was assumed, warm dry clothing substituted for the wet, stimulants interposed, and as soon as practicable the anterior nares plugged with flegets of lint or cotton, well saturated with a solution of acetas plumbi. Under this treatment the energies of the system rallied to an extent, and the patient had a tolerable nights' rest. Feeling considerably refreshed the next morning, and accustomed to active exercise he could not be persuaded to keep quiet, but arose and occupied himself with some minor matters of care and oversight, rather than actual labor. About the same hour of the day, (11 A. M.,) the hæmorrhage recurred, pursuing nearly the same course as before, and strange to say, still unwilling to surrender his favorite "system," the same mode of treatment was resorted to, and continued with the same result, except that the exhaustion was more complete and alarming. At about 6 P. M., as before the physician was again hastily summoned and the same course of treatment which he had before instituted, was followed, and with the same results, syncope and suspension of the hæmorrhage. At this time that form of nervous irritability which characterises in a remarkable degree the condition of emptiness of the circulating system consequent upon severe and protracted hæmorrhage, supervened and added much to the discomfort of the patient—he had a disturbed night and was but little refreshed when morning came. It was found too that the

hæmorrhage was not completely suspended, that blood was escaping from the posterior nares, and constantly finding its way into the stomach. As a consequence, soon oppressive nausea occurred, followed by vomiting of the blood thus swallowed. This condition continued during the third day, and also during the succeeding night, being often interrupted by syncope which was getting to be an exceedingly alarming symptom.

With these discouraging features of the case, the Dr. now almost constantly in attendance, contended faithfully, seeking by plugging the anterior nares, astringents, stimuli, rest, &c., both to suspend the bleeding, and augment physical energy. With his utmost efforts however thus directed he accomplished but little—the hæmorrhage recurred at short intervals the alarming syncope, was re-produced, and all things considered the case had assumed a most hopeless character.

The fourth day from the attack, brought no mitigation of the dangerous symptoms ; on the contrary all the phenomena of the case had become aggravated. This condition continued till 2 o'clock on the morning of the 5th day, when the writer was called. We found the pulse scarcely perceptible at the wrist, the temperature extremely reduced, in a word the patient was but one remove from actual dissolution. Forbiding as the case really was, it was resolved to plug the *posterior* nares without delay ; thus by suspending the hæmorrhage, and by the soothing and restorative influences of anodynes, diffusable stimulants, appropriate nourishment, and absolute quiet, to give the patient the only chance for recovery.

The operation was made in the usual mode and with but little difficulty, notwithstanding it had to be done by candle-light, and the strong tendency to syncope making it necessary to keep the patient in the horrizontal position. The right nostril was plugged, and it was intended to plug the other also as soon as the patient was somewhat restored from the consequent anxiety and fatigue ; but it was soon found that the bleeding had been, latterly to say the least, confined to the nostril already plugged, and we were saved the necessity of repeating our manipulations and of subjecting the patient to additional suffering.

His recovery was slow, and many months elapsed before the anæmic condition, induced by the protracted hæmorrhage, (and perhaps the depressing influences of cold water,) was sufficiently corrected to enable him to resume labor, or much mental effort.

Remarks:—The case above detailed presents, at least, two subjects, worthy of comment, which from their intrinsic importance, practically, might justly merit a separate essay: they are, the influences of cold on the vital movements of the economy and the really injurious effects of the *cold water system*, as it is practiced at the present time, without regard to established physiological laws or conceded therapeutical principles. To each of these, we propose to address a few remarks.

The physiological and therapeutical effects of cold must, in truth, be regarded as relative; i. e. within certain limits; beyond these absolute and unequivocal.

In subjects of average normal vitality "cold applied suddenly, and, for a short time, invigorates, because it is followed by a healthy action in which the vital properties are exercised and exalted." Hence it is, that the gradual recession of the heat of summer, in early autumn, inducing augmented activity, in exercise, and a more urgent desire for substantial food, in all examples, save where organic disease, or some other debiliting influence has overcome the recuperative powers of the system, promotes physical vigor, and augments the sum total of general health. If, on the contrary, the condition of the constitution be that of asthenia, if anæmia predominate, and is associated with a state of high nervous impressibility, as also, other conditions of like vital tendencies, the application of cold, whether by exposure to a greatly diminished temperature, aspersion, ablution, or the bath, is manifestly injurious, and for the best physiological reasons. If the lymphatic temperament predominate, nervous energy and the circulation being much less active, the effects of cold over the vital actions, will be much more distinctly marked, than in persons, in whom the sanguineous, or nervo-sanguineous temperament is the prevailing characteristic. The truth of this proposition was amply illustrated during the memorable campaign, against Russia in 1812 as shown by the eminent and indefatigable Larrey. He says, "I have remarked, cæteris

paribus, that those temperaments, entitled warm and sanguine, resist much better, the action of this sedative agent, than those designated by the generic term lymphatic."

Nor is this fact more strikingly characteristic of individuals than of nations. Hence, says the same astute observer : "the ravages of death were more rarely displayed among those individuals who were from the southern countries of Europe, than among the inhabitants of the northern, and moist locations, such as the Hollanders, Hanoverians, Prussians and some of the people of Germany."

So remarkable was this difference that according to the same authority "a regiment of grenadiers, Hollanders, consisting of one thousand seven hundred and eighty-seven men, officers and soldiers, almost totally perished :—only forty of the whole number, including the Colonel, returned to France, while two other regiments of grenadiers, constituted of men chiefly from the southern provinces of France, preserved a pretty large part of their soldiers."

As regards the nervous and circulating systems there can be no doubt of its direct and overwhelming powers. All experience confirms the fact of its obliteration of sensibility and as evinced in characteristic numbness, and either mental obtundity, or complete inactivity. Also as regards the circulating system, observation sustains the truth that "when long continued, its own sedative and debiliting effects are permanent, it weakens the circulation, especially that of the surface, causes internal congestions and directly lowers all the vital energies." Not only does theraputical observation but physiological experiment establishes the same doctrine, and its action seems directed with special force upon organs that are supplied with a great abundance of capillary vessels—as the mucous membrane of the nose, the lungs, alimentary canal, &c.

Now let us apply these principles to the case before us, and we think the following proposition will be so fully sustained that it may be regarded as an established law of the constitution.

Cold, prescribed for the suppression of hæmorrhage, for a certain time, and carried to a limited extent, restrains or effectu-

ally cures it, but if at this point, it only restrains the hæmorrhage the further and protracted continuance of its use is hurtful—giving rise to extreme sedation, and therefore relaxation of the minute capillaries, it augments the bleeding incalculably, instead of producing the desired effect. In the first application of cold water, therefore, the bleeding was restrained and the patient had high hopes of success, but in obedience to the law which we have suggested, when continued, in excess, tonicity flagged, and the capilliaries became mere passive tubes, whence the blood escaped without resistance. Herein is contained an important practical doctrine which we wish to enforce and which prompted us to report the case.

All must have observed how difficult it is to suppress bleeding from a simple incision, or laceration when the accident occurs to parts long exposed to a low temperature and in wnich vitality, though not annihilated, is greatly reduced—as when the lumberman cleaves his well-nigh frozen foot. That extreme cold relaxes the capillaries of certain tissues, as above indicated is also fully corroborated by the following from a distinguished writer. In speaking of the stupor, and ultimate insensibility induced by extreme cold, he observes: "in some such cases, there has been a flow of blood from the nostrils or ears; the stupor has continued for hours, after the heat, and circulation have been restored, and in fatal cases much serious effusion has been found in the brain."

The same illustrative phenomena were observed, on a large scale, by the distinguished French Surgeon from whom we have already quoted, and moreover that not only the *capillaries* were relaxed but the *sphincter vessicæ* also, as shown by the following; "there frequently occurred previous to death, an involuntary discharge of urine, and in some instances hæmorrhage took place from the nose."

We have, thus, presented the principle considerations, in reference to the influences of cold, that relate to the case above detailed; there are other effects of the same powerful agent, both physiological and therapeutical, which our limits will not permit us to notice. We come therefore now, to consider our second topic of remark, viz: the destructive influences of the modern Hydropathic vagary

Perhaps there are but few subjects, within the purview of our science, in regard to which, even physicians are less thoroughly informed than the exact therepeatical uses of the bath, in its various forms, and none in reference to which the people feel themselves more competent to judge, and yet in relation to which, they really need instruction more. "Since the community have been deluged," says an able writer, "with the watery flood of specious *water cure literature*, by the horde of half educated men and women who retail the precious commodity, we have observed a steady increase of sudden deaths, from congestive complaints of the lungs and bowels, and more especially of delicate young and middleaged people." Now this is precisely what ought to be expected, when it is considered that this class of persons, endowed with a low grade of vitality and in whom, therefore, the "temperative principle" is at a low standard are in the least favorable condition physologically to resist the injurious effects of cold water. and, what is more, to withstand the debilitating influences of the associated regimen—abstinence from nourishing food. The great error of the system like that of all the other irregular, systems of the present, and all past time consists in its indiscriminate application to every form of disease, irrespective of the condition of the economy whether anæmic and prostrated or plethoric and robust. If our observation of the practical effects of the Hydropathic "invention," does not deceive us, even in cases in which the bath might be made available, for good, if judiciously used, its salutary effects are defeated by the excess to which it is carried.

We could recite examples of the plethoric and vigorous, whose constitutions have finally succumbed, and who, beyond a doubt, have gone to a premature grave, from the sedative and deteriorating effects of the long continued use of cold water, in accordance with the rules of the system dogmatically promulgated.

That cold, locally applied and carried to a certain limit, is of great potency, in the supression of hœmorrheges of an active or sthenic type, and especially, in epistaxis is a conceded doctrine of legitimate medicine a doctrine on which practice is always based. In those that are asthenic, or passive, it is to, say the least, of doubtful efficacy, in any degree except for the

briefest period. Not only is the water-cure injurious,as indicated in the above quotation, but in the occurrences of every day practice, like pernicious consequences are observed in patients, whose diseases are in the majority of examples, amenable to mild treatment. So true is this in the various forms of diarrhœa, passive hæmorrhage &c., that it deserves to be received as a practical axiom that in these and analgous affections, it ought never to be resorted to.

We pass without notice many popular usages, the offspring of ignorance and imposture, which all who observe with care and who think philsophically,must concede to be deleterious to general health.

But we have said, the great fault of the water-cure system, consists in its indiscriminate application to every variety of diseased action, irrespective of all considerations that relate either to the actual pathology of the disease, or the state of the constitution as regards vitality.

It needs no argument to convince the reflecting physician, nor even the thinking non-professional reader, that no more glaring and fatal error can attach to any system. Nor can argument be necessary to convince such that constitutions differ remarkably in different individuals at the same period of life, that the condition of the constitution in the same individual differs under varying circumstances of exertion, mental and emotional influences, modes of living, climatic changes and at different periods of life.

These positions admitted, it must be clear that the multiplied causes of disease acting on constantly varying vitality must impress upon the pathology of every disease a character that belongs to it essentially, which in every rational system of medical practice will be recognized, and from which the competent practitioner will as if by intuition deduce the necessity of a more or less extensive modification in the treatment of even the same disease, in different individuals, and in the same person when it arises from various causes, and under different physiological conditions.

The doctrine here inculcated seems so self evident as to occasion surprise that it should ever have been overlooked.

In conclusion we offer the following propositions as a brief summary of the principles, which in the present state of medical science ought to guide in the therapeutical application of cold water in the treatment of disease.

1st. In febrile and other diseases in which a reduction of vascular excitement is indicated, if the surface be dry the pulse steady and firm, and the temperature of the body, uniformly above the natural standard, cold water either by the douche, ablution, or aspersion is a potent remedial agent.

2nd. If the pulse be fluctuating, the temperature of the body variable or unequally distributed, the patient pale, and dibilitated, in a word if the asthenic diathesis predominate, then the use of cold water save to the head, in examples of obvious local determination ought to be absolutely interdicted.

3rd. Though other conditions, as a certain degree of steadiness of the pulse, pungency of heat &c., may seem to demand the sedative influences of cold, yet if perspiration be present and somewhat general, the external application of cold water is inadmissable.

4th. It is most appropriate and therefore most successful as a remedial measure in those physiological states in which as we have indicated, in health it is promptly followed by salutary reaction—in which it operates as a stimulant and augments general strength. K.

ARTICLE IV.—Observations on a recent case of Conservative Surgery.

Is the profession becoming more honest, or is it growing more reckless?—were questions which forced themselves upon the mind in perusing a recently reported case.

Occupying a prominent place in its pages and contrary to all its peculiar usages, illustrated by creditable cuts, an article appears in a journal that shall here be unnamed, contributed by one upon whom shall not here be inflicted the unenviable notoriety which, oblivious as Dogberry, he has there sought—a sketch which is but an epitaph—not of the dead only.

It is difficult to approach a review of the particulars of this case without heartfelt chagrin at the pitiful figure cut by "our glorious profession" before all the "outside barbarians."

The details are simple. A poor fellow of thirty-two or thereabouts finds his way to a hospital "complaining of a pain running through his back and shoulders, a fullness of his chest and stomach, and at times, of palpitation of the heart." Health had not been very good for three years previous.

The hospital attendant discovered no particular disease of the chest, "excepting a very weak regurgitation with the second sound of the heart."

"*After remaining in the Hospital for nearly a month*" certain symptoms led to an examination "when a large tumor was discovered pressing out below Poupart's Ligament (left side) and looking toward the thigh of the right leg, and crowding the organs of generation towards the same, and extending downwards on the thigh *eight inches below the Ligament of Poupart.*" The tumor was painless except under pressure which gave rise to a dull aching sensation over its surface. The patient, four years previous, discovered a small hard lump in his groin which had enlarged irregularly to the time of the examination, when the "critical" character of that process led to its rapid increase.

It appears that the operator examined the tumor *in situ*, and became fully convinced of its cartilaginous nature. It appeared to have its origin from the ascending ramus of the ischium and to be slightly moveable on its point of attachment.

What lends additional interest to the case is, that many of the magnates in attendance upon the last meeting of the American Medical Association, examined the tumor, expressed *different diagnoses, yet all recommended its removal.*

May 12th the patient was chloroformized—a V inscision made, having its base over Poupart's ligament, and the apex at the anterior border of the tumor, and then, after sixteen minutes' cutting, the tumor was removed externally to the thyroid foramen, but quite unexpectedly was found to extend internally, beyond the inquisitive scalpel, behind the bone and into the cavity of the pelvis.

"*The removal of this latter part was not deemed advisable, as*

the hope was expressed that it would be discharged by the ulcerative process. The integument was then brought together by sutures, the wound covered by a pledget of lint, and the patient put to bed."

Faintness and emesis followed the anæsthesia. Little blood, and that from venous trunks, was lost, but the patient gradually sunk and died May 14th, at 4 o'clock, P. M.

Fortunately the death of the patient would eventually have resulted from the disease, had it not been precipitated by the operation—so much the reporter naively admits.

Now, remember brethren, this case occurred not to a country practitioner, but within the walls of a city hospital, where we are urgently solicited to send our students to become better versed in the mysteries of diagnosis, prognosis and operative procedure. In the very focus of medical light, a patient remains nearly a month under treatment for "no particular disease ;" but with an undiscovered tumor eight inches in length below Poupart's Ligament crowding the organs of generation to one side, and widely displacing the femoral vessels and nerve. No question by either Principal or Parasite, no examination by either the skilful operator or his well fed council, gives the slightest hint of any difficulty below the ribs, which of course have been thumped and stethescoped in the most approved style of medical foppery. "*Weak regurgitation*"—indeed !

However the tumor was at last found and, *mirabile dictu*, was examined by the operator *himself in situ*, with a pair of worthies to aid him in making that "critical examination," from which "it seemed to take a fresh start and grow very fast."

But how was it examined ? How did those surgeons of the American Medical Association sagely arrive at their different diagnoses, and ultimately single conclusion ? Was it Dr. Wood's case where "the tumor had grown so large in the cavity of the pelvis as to obliterate the rectum, and cause an abnormal opening to take place to relieve the patient of his fæces !" Did the idea occur either to the Selkirk or man Friday of this romantic history, that the tumor might possibly extend inward to the cavity of the pelvis, and there produce obstructions somewhat more important than the "weak regurgitation" that had thus far drowned their percipient faculties ?

Was the thyroid foramen forgotten? Were Rokitansky and Paget on enchondroma consulted *before*, or *after* the *post mortem?*

Ancient. Marry, sir, our tender and cutter, Verdant here, excepting your worship's presence, has taken out part of as good an Enchondroma as any in Paget and Rockitansky.

Verdant. A good old man, sir; he will be talking; as they say, when the age is in, the wit is out; God help us! it is a world to see! Well said, i'faith neighbor Ancient:—well, God's a good man; *an two men ride of a horse, one must ride behind.*

"In the examination of which (the cavity of the pelvis) the bladder was found pushed upwards, and resting in the right iliac fossa." "Critical examination" indeed, which found this only *post mortem!* Would it have been discovered if the rectum had been obliterated, and an abnormal opening had taken place to relieve the patient of his fæces! Did the examiners have gloves on, or were they averse to *a posteriori* conclusions? Clean fingered pinching of a tumor, wholly innocent if only external—altogether fatal if internal!

Contempt for such a shallow diagnosis is merged in a stronger sentiment, as we contemplate the disastrous result.

But to the operation—for this seems to have been agreed upon by all those who 'had examinationed the aspicious tumor which the Hospital had comprehended.'

Although not present, we venture to assert, on mere mechanical grounds, that even the external tumor could never have been removed without something more than a V incision with "its base over Poupart's Ligament and the apex at the anterior border of the tumor," eight inches below. The only correct mode would have been a free crucial incision allowing the reflexion of four considerable flaps. Otherwise the operation must have been, as it evidently was, tedious and awkward. Deep in a narrow cleft the operator darkly groped, picking a little here and a little there, uncertainly sawing and wiggling and gouging and nipping, until the walls of the cavity resembled the fragments of a RAT'S breakfast, and then had to modify the external incision after all! Was it not so? The report gives us no glimpse at the fact—but we steadfastly believe it must have been so, and put it upon record for the future use of all juvenile aspirants for surgical laurels—not to speak of cypresses.

Was the operator afraid of wounding the displaced femoral vessels by the transverse incision, or did it not occur to him? If the former, he had better recommence operations on the dead—if the latter—forego experiments upon the living. We commit him to the tender nursing of his Sydenham grandam.

Fortunately no attempt was made to follow the tumor inside the foramen thyroideum, "as the hope was expressed that it would be discharged by the ulcerative process!" Was this the only reason—or was not the patient incontinently covered up to die, without further pursuit of surgical fame under difficulties? We pause for a reply—merely noting that to secure the perfect success of "the ulcerative process," "the integument was then brought together by sutures, and the wound covered by a pledget of lint, and the patient put to bed"—a procedure which smacks strongly of anxiety for immediate adhesion of the walls of the wound, without regard to the exigencies of the very desirable "ulcerative process."

What was the cause of death in this case? So far as the meagre *post mortem* details go, it must have resulted from the systemic shock of the operation, combined with the long continued inhalation of chloroform. That is, after all, the great danger from chloroform. Profound sedation by it, especially if continuous, prevents subsequently healthy reaction in the system. As on the one hand, it should not be used for merely momentary pain—so on the other, it ought not to be long employed. Better allow the patient to suffer in the interim sufficient pain to fully rally the nervous system, and then if needed exhibit again. Sixteen minutes were eight, at least, too many, even though the operation really required over five or six.

The autopsy, however, had its use, for it explained satisfactorily the "weak regurgitation" sound, and aided in the diagnosis of enchondroma, although we do not hear of any observation upon the tumor by the microscope. No surgeon or medical man, however eminent he may be in the practical department of his science, can be justified in pronouncing and recording his opinion of a morbid growth, unless it has been founded upon a careful analysis, either microscopical or chemical, of its structural characteristics."

It is a little amusing to find a bit of antique phisiology thrown in here, to enliven the sombre hue of "the critical" *post mortem. Cujus testimonio sit*: "The aorta itself was much thickened in its coats, *and doubtless aided the ventricle in a greater degree than normal to propel the current onward.*" "The powerful influence of the aorta on the current of the outgoing blood" rendered much service in lessening the regurgitative sound! *Ohe! jam satis!* Was there a new tissue in that aorta? *Do* the pulmonary arteries bring air from the lungs to cool the heart?"

"Is there any use in the aortic valves at all, or are they not mere ornamental appendages like the fringe of the epaulettes of 'One of the Marines?'"

We commend the bold operator to some little study of mechanics and anatomy combined on these points. He will find that the aorta adds no impulse to the current of the blood—its elastic structure fits it for the important function of equalizing the impulse, tending to convert the jet to the steady stream. In this case, its augmented strength spent its force in obliterating the valves and dilating the ventricle, as much as upon the outward current.

We leave this case. Heralded in the halls of the National Association--seen by several of the magnates there present, under the assurance by the reporter that he "was goin' to operate"—it cannot be said "the Secretary stood alone."

The poor New York surgeon was openly castigated before the Association for merely exhibiting a bone peculiarly diseased—other members advertise their intention to "carve at venture," and cunningly convert the tacit smile of contempt into high approval. Has position anything to do with their escape from censure? When the incidents of our biography come to be collected, *antemortem*, we hope our portrait may not smile "radiantly calm" between "Plate 1, anterior view" and "Plate 2, posterior view." Æsox.

Dr. Porter, Professor of Anatomy, in Nashville University, died recently from a dissection wound.

ARTICLE V.—Cure of Suppurative Arthritis, following fracture of the Patella, with preservation of mobility. By William Lewitt, M. D.

A lad aged 16 years while running, slipped and struck his knee against a stick of timber, and though considerably injured and painful on motion, he gave but little heed to it at the time. On the second day after the accident the pain and tumefaction were so much increased that he was unable to leave his bed. On the fourth day I was called to see him. Found the joint very much inflamed and swollen—pulse about 110, high fever, and great pain on motion.

Treatment.—I gave a Saline Cathartic followed with a Solut Potassa Citras, and Tart Ant, with Morphia every two hours. Put the limb upon a splint and applied Liq Plumbi, and Tinct Opii, with ice-cold water. The next day found the swelling and fever somewhat abated, and on close examination, discovered a small V shaped fragment separated from the upper and outer part of the Patella, with but slight displacement, which I coaptated and retained in Situ with the figure of eight bandage. There was yet considerable inflamation about the joint, and I continued the cold applications as above, they being most agreeable to the patient. The inflammation began gradually to subside, and considerable fluctuation was discovered on each side of the Patella ; the patient began to have slight chills, which induced me to suspect the formation of pus in the cavity of the joint, and I then applied warm water dressings. The patient became quite low, although I had discontinued the Antimonials for several days, and given light stimulents. On removing the dressings, pus flowed out profusely, mixed with a little bloody serum, from the outer side of the joint close to the Patella. There were no signs of pus near the surface when I saw the patient, on the morning previous, except the fluctuation which had existed for some time. The next day made an opening back of the one already formed, from which but little pus was discharged. On passing a probe into the spontaneous opening, *it could be felt on the inner side of the joint under the Patella.* I then advised nutritious diet, ordered Quinine and Porter, and continued the warm water dressings. About four days afterward I discovered indications of pus at a point four

or five inches above the opening, made in the joint, on the outer and back part of the thigh. A puncture was made, which discharged freely, and relieved the fullness of the joint, although there continued to be a little discharge mixed with *Synovia*. Under this treatment the patient recovered rapidly. In about eight weeks I began to make passive motion, which at first caused considerable pain ; but it was continued gently every day for some time. At the end of twelve weeks the patient could walk comfortably with the aid of a cane. *He entirely recovered with the joint as perfect as before the accident, and with ossific union of the fractured Pattella.*

Ann Arbor, August 1, 1856.

ARTICLE VI.—Influence of the Imagination in Producing Symptoms of Disease.

While staying at a hotel in one of our frontier villages, not long since, I was much interested in the relation given by a gentleman of the company of an adventure which happened to himself, and which, illustrating, as it does, the power of imagination to effect the physical man, may not be deemed unworthy of repetition.

The gentleman had been spending several days in the adjacent forest, in company with two or three companions, "looking land." When setting out on the expedition he met a friend who had been hunting in the locality he was about to visit, who gave directions for finding the carcass of a fat deer he had slaughtered, in case they should find it convenient to make use of it. In the course of the ramble, the deer was found, nicely dressed and hung upon a sapling, in a spot suitable for pitching their camp, on the banks of a stream. A venison steak is not an unpalatable dish anywhere, but to produce the greatest amount of gustatory enjoyment it should be cooked and eaten in hunter style by a hungry wanderer, in the woods. Our friend and his associates were not slow to make the most of the opportunity.

It was well known that, at that time several hunters were engaged in that vicinity in killing wolves and other animals by leaving poisoned bait in situations where they would be likely to find it. All at once, in the midst of the meal, it occurred to our friend that possibly poison might have been placed in the venison prepared for supper. He recalled to mind what he had formerly heard relative to effects of strychnine, and tried to picture to himself what would be his sensations if he were poisoned with it. Presently those sensations began to be felt. He could eat no more. Attempting to move, the muscles refused to obey the impulse of the will, and he sank down almost powerless. With great difficulty he managed to crawl to the edge of the stream, and attempted to drink, but was unable to swallow a drop of water. The symptoms were in all respects such as he supposed would result from poisoning by strychnine. At length, however, seeing his companions continue to eat without any ill effects, his reason began to assert her authority, and he began to realize that probably the whole difficulty had its origin in an excited imagination. Impressed with this belief, he partially roused himself by a strong effort of the will, and soon recovered, but was unable to taste venison again that day. M. L. L.

Duplain, Aug. 1856.

ARTICLE VII.—A practical Treatise on the Art of Making and Preserving Microscopical and other Preparations. By Henry Goadby, M. D., F. L. S., &c.

Attached to the under surface of the wooden lever, is a strong steel spring, about one inch wide, the profile of which is shown at B, fig. 7. *m* is the spring, to be screwed to the lever by the flat extremities. In the centre of the curved portion, there is a slit, through which the upper part of the spindle *n*, previously reduced for that purpose, passes, and in which it can freely play; it is kept in its place by the button *o*.

The square plate *i*, [A and C,] is screwed down to the board *j*, by four nut-headed screws. *h*, *h*, are two thick pieces of wood

screwed on to the bottom board *j*, their inner edges being under cut to form a beveled groove, in which the two pieces of wood marked *k*, being beveled to the same angle, may freely move.

In the centre of the pieces marked *k* is a slit, through which passes a nut-headed screw to connect them with the lower board, and to admit of their adjustment, their inner extremities are cut to form half a square, and are intended to receive the block

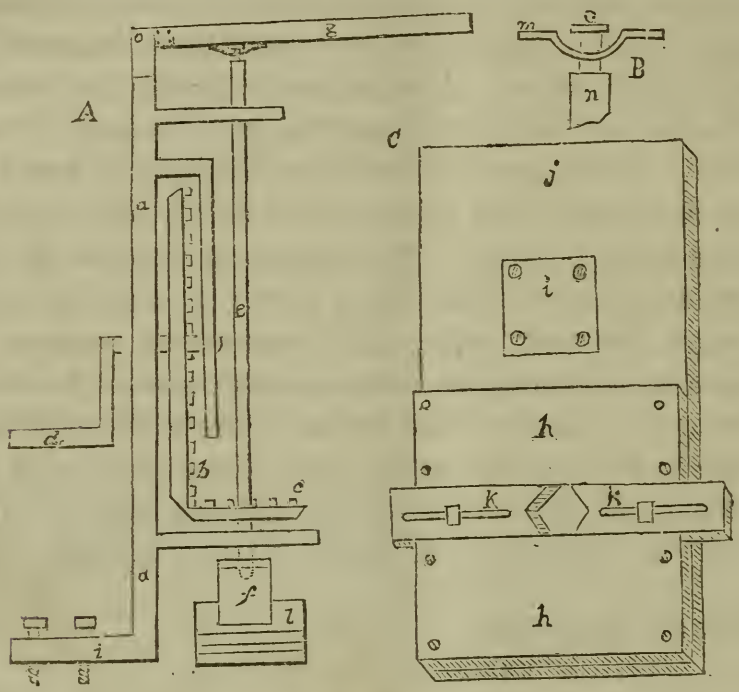

Fig. 7.

of glass, placed diagonally, to be drilled by the machine. The block of glass, *l*, should be placed exactly in the centre, and it can easily be secured in its position, by clamping the side pieces of wood, by means of the nut-headed screws and collars.

With this machine, I employ superfine emery, and water. It cuts best by a *dragging* motion ; pulling the crank half round with one hand, whilst the lever is kept down with the other; and then lifting up the lever, and allowing *the crank to go the other half round without grinding.* By alternately lifting up the lever, and pressing it down, the emery works into the cut ; whereas, if the lever be kept steadily down, either by a weight, or by the hand, and the crank turned constantly round, the drill will be cut away much faster than the glass.

The fixed position of the horizontal beveled wheel, *c*, would seem to preclude the possibility of elevating the spindle, *e*, the required height.

To obviate this difficulty, a notch is made in the wheel *c*, into which a square steel plug 1 1-2 inch long is driven, which works freely in a corresponding slot made in the spindle, *e*.

The same directions apply to cementing the round, and oval cells to the slides, as those already given ; and when finished they appear like fig. 8, where *a* represents the slide, *b* the cell.

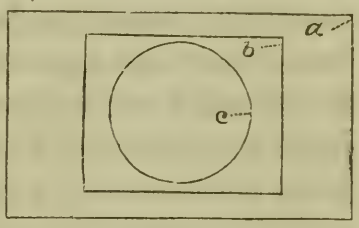

Fig. 8.

Cells cut out of the *very thin glass*, that which is usually employed for covers, rarely answer, *for want of flatness* in the glass itself; and yet, a great number of very beautiful, and valuable, microscopical preparations, of the animal and vegetable kingdoms, can only be preserved *in fluid*, and by the introduction of some medium, to defend them from pressure, between an upper, and lower plate of glass. For this purpose I have long employed the marine glue, as the material from which to con struct *very shallow cells*. Subsequently, the same subs-

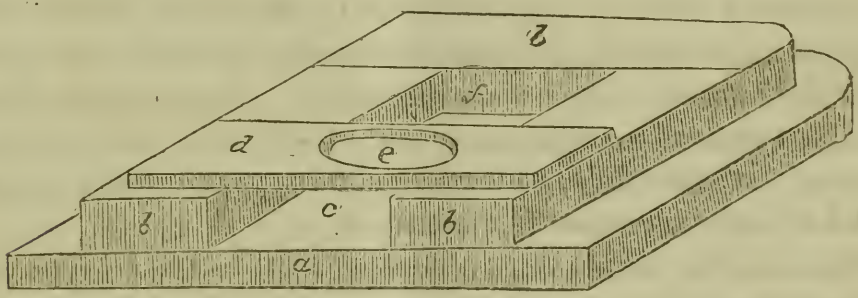

Fig. 9.

tance has been employed by others for a like purpose, as Vide Quekett's Treatise on the Microscope; but the modus operandi, as therein described, differs so essentially from my plan, that I think it expedient to give a description of it.

For neatness sake, it is desirable that the cell, whether round or oval, should be placed in the *centre* of the slide, and to ensure accuracy in this respect, together with rapidity of action, I made a tool described in the accompanying figure, 9.

a is a flat board of the substance represented in the figure ; *b b b*, are three pieces of wood raised upon *a*, and so placed that

a space is left, *c*, from front to back; this is intended to fit the bottom glass, on which a cell is to be made, and should fit the short diameter of the glass so well, that it can only pass in, and out; in other words, room to admit of lateral motion is objectionable. The space is not intended to be as long as the greater diameter of the glass. *d*, represents a thinner piece of wood fastened to the sides of the frame *b b*, in the centre of which is a round hole,—the size of this hole can only be regulated by the width of the glass. One size slide that I have long used is less than that recommended by the Microscopical Society, and I have drawn the figure to exact dimensions of the apparatus it is intended to represent. The round hole is to receive, and form a guide for, a round copper, brass, or tin tube—copper being the best—or a gun punch. The exact position of the perforated cross piece of wood, can only be ascertained (as will soon appear) from actual experiment.

Having determined the size of the slip of glass, upon which a cell of marine glue is to be formed, it is necessary to arrange the diameter of the circle, which is to form the *interior* margin of the cell.

Procure a tube of copper, brass, or tin, about three inches long, or a gun punch, the *outside* diameter of which corresponds with the *internal* margin above described. Especial care should be taken to have a sufficient space outside the circle, and the sides of the glass slide, to form a good support for the top glass, and for the black cement to secure it.

The hole in the cross-piece *e*, must allow the tube to work easily through it, and the cross-piece so fitted to the frame, that when the glass slide is placed in the space *c*, the tube placed in the hole in the cross-piece, will descend upon the *exact centre* of the slide, equi-distant from end to end, equi-distant from side to side. The accurate adjustment of the cross piece is somewhat troublesome; for *circular* cells, it is not very important; but for *oval* cells it becomes a necessity.

To make the cell, place the glass slide on the iron plate, and apply the spirit lamp; put some marine glue on the glass, and as it melts, distribute it evenly over the glass, to an extent *beyond the proposed limits of the cell;* the *quantity* of the

glue must depend upon the depth of cell required. If it be wanted *very shallow*, continue the application of heat to procure the necessary hardness of the glue, but in all cases the glue should be made tolerably hard by inspissation. Remove the glass slide from the iron plate to space c, in the wooden frame, dip the end of the metal tube in water, pass it through the guide aperture in the cross-piece, press it firmly upon the glued surface of the glass slide, turn it half round, in each direction and remove it—a circle will be cut in the hot glue on the glass, the interior of which can be (now) easily removed, the water from the tube assisting.

It is easy to make an *oval* cell of any dimensions in the *long* diameter commensurate with the size of the apparatus, in this way: cut some pieces of glass the exact width of the space *c*, 1-8th, 1-4th, 3-8ths, &c., wide; place one of these in the frame close up to *f*, now put the glass slide in its place, resting against, not the wood *f*, but the narrow slip of glass placed there; make the round hole in the hot marine glue with the punch, instantly *turn* the slide end for end, and punch again, remove it, and with a knife connect the *axes* of the two circles, clean off the glue from the interior, and the oval is made. If the aperture in the cross piece be other than exact, the oval will be *diagonal* in respect to the long diameter of your slide.

Now grind the cell upon the emery plate to the required substance—it can be made beautifully flat, and then, by means of a square, and knife, form the outer lines of the square in which your round hole is punched, or the ends of your oval cell, as the case may be: my *small* slides are so narrow, that the space beyond the circle in the smaller diameter is only enough to give a required margin for the cover, and cement.

A little piece of cotton wool, dipped in liq: potassæ, held in a pair of forceps, and applied to the interior of the cell, will soften the glue, and it can then be easily removed with a scalpel, small chisel (1-8th diameter,) or lozenge shaped engravers' tool. When finished, the cell is really a beautiful one; I have never had a preparation in this form of cell *fail*.

Cells made of *sections of tube* are very objectionable for the following reason—they can only be made true, by a compound

motion of this kind, i. e., they must not only be ground with a circular motion on a flat surface, but revolve on their own axis simultaneously.

If such a disc be firmly held by the thumb and finger and submitted to the grinding process already described, the *pressure being unequal*, it will cut quicker beneath the finger and thumb than elsewhere, and still more beneath the thumb than the finger: change its position, and you have the like result, so that *holes*, or *hollows*, must be formed, unless the disc can be made to revolve *constantly, and uniformly*, always subject to the same pressure.

With such a surface, it is hopeless to expect to obtain contact with flat glass, and marine glue.

Apparently you have a joint: but if the preparation be subject to the slightest jar at any time, off comes the slice of tube cell, and the preparation is lost.

There are many preparations of entire animals, no less than dissected portions of them, which can be well displayed only in vessels with flat surfaces, in contradistinction to round, or oval bottles; but, from their greater size, they cannot be contained in vessels constructed on the principle of those already described. For all such, I build up a *box* of glass, consisting of four sides, the bottom plate (or slide) and the top, or cover—six pieces in all.

These vessels are confessedly difficult to make; yet they form the most attractive and beautiful exhibitions that can be put into a museum. The trouble I have had with these upright vessels, no less than my great desire to submit them, and the preserving fluids, to the only satisfactory test—time, has retarded the publication, on my part, of the several processes herein referred to.

Having settled the length, depth, and width for an upright box, the glass for the sides should be selected of sufficient substance for the bulk, and weight of fluid the vessel is destined to contain; and it will frequently happen that, the ends (by which I mean the two lengths of *least diameter*, calling the larger and

outer portions the sides, as *vide* the annexed figure 10,) require to be somewhat thicker than the sides, to insure sufficient surface for a joint. The glass should be cut as true, and square, as possible in the first instance; the two side pieces, and the two end pieces, should be connected together, respectively, with the marine glue, forming two pairs of glasses. First, bevel all the glasses, on the metal, or emery plate, as before directed; and then proceed to make perfectly flat the extreme ends of each pair of glasses; this, the most important, is, at the same time the most difficult part of the work, and such as can be accomplished only by practice; the position of the glass in the hand must be frequently changed, for the pressure of two fingers on one side, opposed to the thumb on the other, will have a tendency to incline the glass to an angle of 45°, whilst the operator believes he is holding it perfectly upright. It frequently saves time to grind till a smooth but inclined surface extend from one outer edge of the pair of glasses, to the other, and then change its position in the hand—the probability is, that there will be the like tendency to form a similar angle, although reversed, and by carefully watching, and measuring, the operation may be suspended at the points where perfect flatness obtains, and just before the inclined plane can be formed in the other direction. A small brass Square will be found of considerable importance in testing the truth of the grinding, but the most severe test is that which I always resort to, namely, to wet the ground surface of glass as lightly as possible, and place on it a plate of plate-glass—the sides of which, for all practical purposes, are parallel: if true and flat, the plate-glass will be seen to touch every part of the ground surface, and form with it a T. Now wipe all the glass just tested quite dry; *breathe* upon the ground surface, and quickly apply the plate-glass—if true, the moisture of the breath will be equally diffused along its surface, and the contact be so perfect that the ground surface will hang suspended for several seconds from the plate-glass.

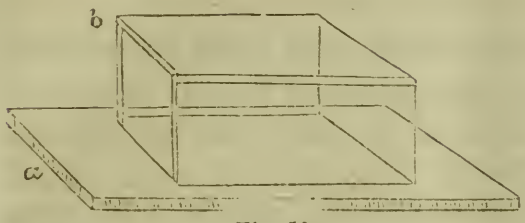

Fig. 10.

If the work endure this test, there need be no difficulty in making a permanent joint.

Again use the iron-plate, un-cement and clean the glasses, prepare the ground surfaces of the ends, and the flat surfaces of the sides against which the ends are to abut, with the naphtha solution ; return all the glass to the iron-plate (if small enough to lie there at the same time) and place marine glue on the painted flat sufaces of the sides ; when melted, put on the *ends*, which will form three sides of an open square, then quickly place the other side on the ends, and carefully remove it from the plate to a piece of wood, or paper—the former, provided with a straight edge (like the cutting board) is the best. While the glass remains hot enough to keep the glue soft, press together and critically adjust the glued surfaces, taking especial care that the sides coincide with the angles of the brass square ; it is most important to remove from the glue in the joint any extraneous particles of dirt. These preliminaries settled, the glass cold, and the glue hard, the operator will have four sides of a box—like a brickmaker's mould—without top or bottom ; this he may now proceed to grind upon the metal, or emery plate, firstly bevelling the edges, by a circular motion—constantly turning the box in his hand to prepare it for the bottom. After this is accomplished, it must pass the ordeal of the former test ; the slide, or bottom plate of glass must be heated on the iron plate, (it having been previously prepared with the naphtha solution, which must also be applied to the ground surface of the box,) and then, after melting the marine glue on the upper surface near the edge for the adhesion of the lower edges of the hollow box, this box is to be applied to the slide, and the whole suffered to remain on the heated plate of iron long enough for the lower portion of the sides of the box to become sufficiently hot to form a joint with the slide, but without melting the joints previously made. When cold, the upper surface must be ground in the same manner as the bottom, with like care, and when finished, the vessel will appear like figure 10.

To give additional support, and assistance to the joints, Mr. Dennis, suggested to me the application of triangular bars of

glass, which he called "angle pieces" cemented into the corners. In my experience of them, they fail, for two reasons—one, because they cannot be ground with sufficient accuracy, and the other, that in cementing them the heat is generally so great as to decompose the glue. I have substituted the following plan with more success: I pour melted glue into the corners, and make the angles of the vessel hot enough to keep the glue fluid, while I cause it to run equally from the bottom to the top of the box—this plan has not disappointed my expectation of it in any instance.

I have made several upright vessels some of them of great dimensions (fifteen inches high, six inches wide, and four inches deep) and extremely elegant in their appearance. A preparation of Physalia pelagica (Portuguese Man of War,) figure 11, will give an idea of this form of vessel; the original box is eight inches high by two inches wide, five-eighths deep from back to front: *a* represents the front side, *b b*, the end pieces, *c*, a block of polished plate-glass half an inch thick to which the upright box is cemented, *d*, a thinner plate of glass forming with *c* a handsome pedestal and heavy support for the upright vessel.*

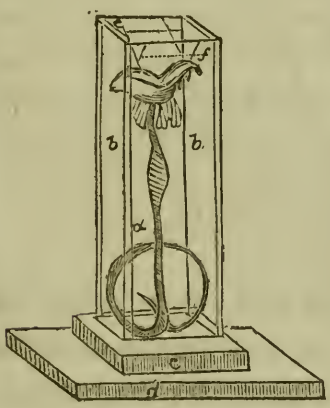

Fig. 11.

The joints of the pedestal, and of the box to the thick upper plate, must be made with Canada balsam, for the sake of transparency; the box must be joined as before directed, with the patent marine glue. When large surfaces of glass are to be cemented together, the iron-plate is insufficient for the purpose, and another plan must be had recourse to. I have already remarked that a red-hot soldering iron may be applied to the edges of glass with considerable impunity, and I use such in the manufacture of large upright vessels. Figure 12 represents the

*The mode of grinding a box of the height here mentioned, does not in any respect differ from that which has been described. Here the end pieces are considerably elongated, and must firstly be made true in the direction of their longer axis—the top and bottom is not to be ground until the hollow box be perfect.

several forms of such irons as I have found desirable. Numbers 1, 2, 3, and 6, are reduced one-half in size; and five is more reduced; 1 and 2 are made of iron rod 3-8ths of an inch square, welded to a round iron wire which is inserted into a wooden handle; 2 only differs from 1 in having the iron wire bent as shown in the figure—they are both eleven inches long, inclusive; 3 is intended to apply the marine glue to the inner angles of the boxes and upright vessels; an end view is shown at 4.

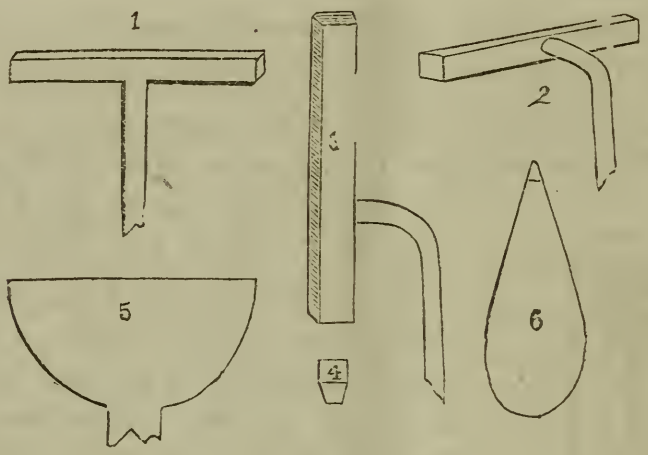

Fig. 12.

The wire of this last is differently fixed, and its length, including the wooden handle, is fifteen inches; 5 represents a much heavier tool, and is designed to retain the heat for a longer time than either of the former. With a pair of such instruments, large surfaces of glass can be well, and expeditiously soldered.

To be continued.

SPIRIT OF THE MEDICAL PRESS.

Analysis of Urinary Calculi in the Warren Museum.

Messrs. Editors :—I sent you for publication a report of the analysis I have lately been making of a portion of the urinary calculi of the Warren Museum. Two facts detract much from the interest of these calculi, one of which is that they are of foreign growth; the other, that no personal history is connected with any one specimen. They were sent from London to Harvard College by Dr. John Nichols, A. D., 1800, and until within a few years have been lying in the dust and mould of Holden Chapel, in Cambridge. We may infer their English origin, and the large proportion of uric acid which enters into their composition gives strength to such inference. In other In other respects the collection is a very fine one. Very many of the specimens are large, and most of the peculiarities of formation find illustration among them. In their analysis I have used the microscope instead of the test tube almost wholly, by which means very minute proportions of any substance may easily be detected, and no room be left for doubt. Without its use, the recognition of many ingredients would be impossible ; and I believe the results attained in their examination before the present knowledge of microscopic chemistry; are to be received with much distrust.

By examining the following table, you will see I have not in all cases pretended to make a separate examination of each layer of a calculus or of its nucleus. Such a course would have been impracticable on many accounts for a week might well be spent over a single specimen if such a course were adopted, even if the successive layers were sufficiently well marked to permit it, and in many cases they are not; to say nothing of the necessary mutilation of the specimen. In each case the entire surface of a section through the centre has been carefully and equally scraped ; by which means we not only obtain all the constituent parts, but their relative proportions also. The general results, however, will only be tabulated here.

It will be seen that the uric acid and the urates predominate in this collection, as in that of the Hunterian and Guy's. In the catalogue of the former it appears that out of 649, the whole number, 212 consist of pure uric acid, or 1 in 3 ; of the urates, that of amonia alone is recognised, while the corres-

ponding salts of lime, soda, potassa and magnesia are passed by. I believe we may fairly question the accuracy of this analysis, and conclude that many among the so-called uric acid calculi would be found to contain the various urates.

It will be an interesting point to be decided hereafter, whether the introduction of our Cochituate water will produce any change in the character of the calculi of the next generation; the more interesting, from the fact that the whole city is supplied from one and the same source, whereas in London the sources are numerous. Lithotrity, however, interferes sadly with our investigations in this matter, for we can form no fair estimate of the structure of a stone from the fragments passed by the urethra, and after the first operation the diathesis may wholly change. It is partly on this account that the recent examinations of calculi show such different results from the older and European collections made when lithotomy was in vogue. In so great a degree is the phosphatic diathesis owing to local irritation, that I doubt if we should ever find it succeeding a layer of uric acid or any urate, unless some inflammation were created by instruments or injections having been passed into the bladder. The propriety of frequently sounding for stone, or of attempting to crush any large calculus, may therefore be called in question, for such practice may easily induce the deposition of phosphates, which after the first crushing may go on with such rapidity as to form about the debris masses larger than the original stone, or a thick crust upon the lacerted surface of the bladder.

Calculi consisting of uric acid,	10
" " " and urate of ammonia	20
" " " " " and urate of soda	10
" " " urates of ammon., soda, potass., lime and magnesia	6
" " " and oxalate of lime	7
" " " " " and urates	20
" " " " " and phosphates and urates	12
" " " " " " "	12
" " " " " " "	5
" " " " " " "	6
" " " " "	2
" " " " " and phosphates	3
" " " carbonate of lime and "	10
	123
" " "	97
" " urate of ammonia	75
" " " soda	27
" " " magnesia	13
" " " lime	12
" " " potassa	9
" " oxalate of lime	41
" " phosphate of lime	33
" " diphosphate of lime	8
" " carbonate of lime	11
" " phosphate of ammonia and magnesia	21

JAMES C. WHITE, M. D.

Influence of the Mother's Mind on the Fœtus.

Under the above title, we notice an article in the *Memphis Journal of Medicine and Surgery* for August, by Dr. T. G. Underwood, of Freemansville, Georgia, containing an account of three cases of deformity in infants, supposed to have been caused by sudden and powerful impressions made upon the mother, while pregnant. The first case is quite extraordinary. A lady in Habersham county, was delivered, at the end of the seventh month, of a child whose left leg was destitute of a foot and ancle, the stump appearing as if the limb had been amputated by a dull instrument, a short time previously; the bone protruded about an inch and a half, and appeared to have been broken off obliquely. The right leg "resembled in shape the fore leg of the opossum. The foot was turned inwards, and the toes were grown together to [*sic*] near their extremities, and were destitute of natural nails, but had claws precisely like those of the opossum. The ring figner of the right hand was off at the first phalangeal articulation, and very much resembled the toe of the above-named animal, and on the extremity was a claw, like those on the toes." At an early period of her pregnacy, the mother had witnessed the killing of an opossum, one of whose fore legs was cut off with an old, dull axe, leaving the bone protruding. She was very much frightened at the time, but she thought no more of it, or very little, until the birth of her child, which died two weeks afterwards.

The second case was that of a living child, whose face "was the color of dense smoke, interspersed with red streaks. The globes of its eyes were in continual motion upwards and downwards, resembling the flickering of a candle. Its eyes were very much squinted, or presented the appearance of a person's eyes looking at a very luminous body" The mother ascribed the deformity to her having witnessed the burning of a neighbor's house, while she was pregnant.

In the third case, the mother expressed to Dr. Underwood, during her labor, her fears that the child was deformed; When born, the child presented the appearance of having been dead for some time. The mother being asked, before seeing it, why she expected it to be deformed, said that she had been frightened by an owl during her pregnacy. Dr. Underwood then examined the child and found her fears verified. Its head was in shape like an owl's in full plumage, &c., &c.

We have quoted these three cases, because we believe that the question of the influence of the mental condition of the mother upon the physical condition of her offspring, especially in causing specific deformities, is not entirely settled; though, we doubt not, the great majority of medical men agree with the remark of Dr. Carpenter, quoted by Dr. Underwood, that "No soundly-judging physiologist of the present day is likely to fall into the popular error of supposing that 'marks' upon the infant are to be referred to some transient, though strong, impression upon the mind of the mother; but there appear to be a sufficient number of facts on record, to prove that *ha-*

bitual mental conditions on the part of the mother *may* have influence enough, at an early period of gestation, to produce evident bodily deformity or peculiar tendencies of the mind." We are disposed to go farther than Dr. Carpenter, and agree with Dr. Dnderwood, that a sudden shock, even of trasient duration, may at times "exert an influence on the fœtus *in utero*"; but we believe that this influence is limited in its effects. It may cause the death of the child, or it may cause an arrest of development in any of its parts, of which a familiar example is the harelip; but that there is any necessary connection between the cause of the mental emotion and the nature of the deformity, we cannot for a moment admit. Still less do we believe that the most powerful maternal imagination can produce a *perversion* of the fœtal development, although it may retard or arrest that process, either wholly in part, thus producing various *bizarre* appearances, which, to those unacquainted with the successive phases of embryonic life, resemble various objects, animate and inanimate.—*Boston Med. & Surg. Journal.*

Complete occlusion of the Vagina and retention of Menses; relieved by an operation through the Rectum. By FRANK HASTINGS HAMILTON, M. D., Buffalo.

Mrs. S., of ———, æt. 35, was brought to me Oct. 19, 1853. Six months before this she had miscarried when in the fourth month of pregnency. The placenta was retained several days, inducing, by its decomposition, a violent meteritis and vaginitis, which resulted, after a few weeks, in a complete closure of the vagna. Since then she has had occasional diarrhœas, and sometimes discharges of blood, especially about the time of her menstrual periods. She has also at such periods a sense of fullness in her loins, and a feeling of weight and pressure in her rectum.

I found the vagina completely closed to within about two inches of the vulva; the rectum and bladder seeming to be in immediate contact. There was no perceptable fullness of the abdomen, nor could I feel any fluctuation through the vagina.

Believing that I could not reach the uterus through the vagina without the risk of opening into either the rectum or bladder, and observing that her health was not greatly impaired, and especially, trusting that the period was near when she would cease to menstruate, I declined any surgical interference.

From this time for a period of about two years, she remained very much as when I first saw her, when she was visited by a traveling surgeon, who offered to give her immediate relief by an operation. The operation was made in the presence of her family physician, and consisted in an incision from the vagina directly through into the rectum, as the sequel showed, though at the time the fact was not known. The surgeon supposed he had

entered the womb, but that it was empty. A hæmoorrhage followed which was very near proving fatal. The wound into the rectum closed readily and she was left in the same situation as before except that she was much weakened by the bleeding.

March 6th, 1856, I was summoned by telegraph to see her, and I found her on the 7th suffering very greatly from the pressure of the accumulated menstrual fluid. For several months, at each period she had experienced great pain, but during the last four weeks there had been no relief except as it was afforded by chloroform in pretty full doses. She had been almost constantly confined to her bed; the enlarged uterus could be distinctly felt in the front of the belly and in the rectum. Examining with a curved probe introduced into the urethra and with the forefinger of my right hand in the vagina, I easily ascertained that the bladder was so deflected downward at the end of the vaginal *cul de sac*, that it would be impossible to reach the womb in this direction without opening the bladder. I therefore determined, as the only alternative, to open the womb from the rectum.

Placing my patient upon the side of the bed, I carried a trocar and canula upon the forefinger of my right hand into the rectum, and then thrust forward the trocar into the womb. On withdrawing the trocar there began to escape through the canula a dark brown, uncoagulated, inodorous fluid. I immediately pushed my finger along beside the canula and, without effort, tore open the womb in every direction, the walls of which were exceedingly thin. About one pint of the menstrual fluid was evacuated. With my finger I was able to explore the interior of the womb very freely, and I could not feel anything like a neck, the closure in that direction was so complete. On withdrawing my finger I noticed that the size of the opening which I had made was very much diminished by a contraction of the wall of the uterus.

Four months after this operation was performed, I learned that Mrs. S. had enjoyed uninterrupted health from the date of the operation, and an entire release from pain. She has menstruated regularly at each period, and without inconvenience.—*Buffalo Med. Jour.*

Rules for Restoring the Drowned. Drawn up by Dr. Marshall Hall, M. D., F. R. S., &c.

The following rules are the *result* of half a year's investigation of Apnœa and Asphyxia—a subject which I propose to prosecute still further, knowing that truth only comes from long continued labor and research. I wish especially to put to the test of careful experiment, the correctness of the dogma, that if the heart has once ceased to beat, its action can never be restored—a dogma calculated to paralyze our efforts in many cases in which hope may really not be *totally* extinct:

1. Treat the patient instantly, on the spot, in the open air, except in severe weather, freely exposing the face, neck and chest to the breeze.

2. Send with all speed for medical aid, and for articles of clothing, blankets, &c.

3. Place the patient gently on the face, with one arm under the forehead, so that any fluids may flow from the throat and mouth; and, without loss of time,—

I.—*To Excite Respiration,*—

4. Turn the patient on his side, and

(i.) Apply snuff or other irritant to the nostrils.

(ii.) Dash cold water on the face previously rubbed briskly until it is warm.

If there be no success, again loose no time; but,—

II.—*To Imitate Respiration,*—

5. Replace the patient on his face; (when the tongue then will fall forward and leave the entrance into the windpipe free;) then,—

6. Turn the body gently bnt completely *on the side and a little beyond* (when inspiration will occur,) and then on the face, making gentle pressure along the back, (when expiration will take place,) alternately; these measures must be repeated deliberately, efficiently, and perseveringly, fifteen times in the minute, only; meanwhile,—

III.—*To induce Circulation and Warmth,*—

continuing these measures,—

7. Rub the limbs upwards, with firm pressure and with energy, using handkerchiefs, &c., for towels.

8. Replace the patient's wet clothing by such other covering as can be instantly procured, each bystander supplying a coat, waistcoat, &c.

These rules are founded on physiology; and, whilst they comprise all that can be immediately done for the patient, exclude all apparatus, galvanism, the warm bath, &c., as useless, not to say injurious, especially the last of these; and all loss of time in removal, &c.; as fatal.—*London Lancet.*

Ergot and Digitalis in Hemorrhage.—A combination of ergot and digitalis, in the proportion of two grains of the former to three quarters of a grain of the latter, given in the form of a pill, six or eight times daily, is highly prised by M. Ed. Carriese, as an anti hemorrhagic in general, and particularly in hæmoptysis and menorrhagia. Accordingly, to him, this combination effects more than either article separately.—*Boston Medical and Surgical Journal.*

Editorial Degradation.

Mighty prompt were New York Editors within a year to raise the hue and cry against a Judge who was tried for official corruption in this city; and they have the holiest horror, too, as do men who *have their price.* In describing the character of those who are convicted of official corruption, the English language is depleted of its adjectival supply. But what means the following incidents?

A paper published in a southern city, in noticing that during eighteen hundred and fifty-five the number of deaths, from all causes, was smaller than during the preceeding year, intimates the belief that this was a result of the freer use of a certain man's medicines, which medicines were largely advertised in that paper. Several of the New York dailies and weeklies have been paid to insert, among their reading matter, editorials from one another, and an article from another publication, that the reason why there were fewer deaths from *Consumption* in New York during eighteen hundred and fifty-five, than during the preceding year, notwithstanding it had a larger population was promptly attributed to the fact that *Medicated Inhalation* had been introduced as a remedy, and then they launched out in praises of the same at a DOLLAR A LINE! Now, having given currency to an untruth for pay, will any one of them show a late repentance, by publishing without pay the following statements, taken from published official tables, showing that not only in New York, where Inhalation was fabricated and cherished, but also in Philadelphia and Boston and Baltimore which had not taken the infection, not only were deaths from Consumption fewer than during the previous year, but deaths from all other diseases were fewer in number. This double fact, simple enough in itself, and undeniable, while it sinks beneath contempt the men who have made use of a fact to bolster up a falsehood to make money thereby, at the expense of the health of their fellow-citizens, does at the same time present a humiliating picture of the credulity or recklessness or purchasability of some among us, who conduct the editorial department of our newspapers.

The mortality in four of our larger cities during the three years past is as follows:

	1853.	1854.	1855.
New York	21,864	23,458	13,107
Philadelphia	9,750	11,811	10,569
Baltimore	5,117	5,933	5 447
Boston	4,369	4,418	4,030

That is to say, the rate of decrease of death from all causes in 1855, as compared with 1854, was thirteen per cent. for New York, twelve per cent, for Philadelphia, nine per cent. for Boston three per cent. for Baltimore.

We think that the unfairness in making use of a part of a fact, must lower the authorship, as well as the abettors of the same, in the estimation of all lovers of truth. It is the exaggeration of this which makes the common liar and the heartless perjurer. And it must be apparent to every person of reflection that any system which needs such aid cannot be true—that any system which draws to it men who are reckless to the truth, must be as baseless as the characters of its advocates.—*American Med. Gazette.*

BOSTON MEDICAL
AUG 2 1889
LIBRARY ASS'N.

NEW PUBLICATIONS.

On the organic diseases and functional disorders of the stomach. By Geo. Budd, M. D., F. R. S., Professor of Medicine in King's College, London. Late Fellow of Caius College Cambridge.

To make a book, i. e., to pluck from the luxurious fields of science or literature the materials for a volume of a few hundred pages and to associate them with tolerable coherance, is believed not to be a work of great difficulty or onerous labor. For this task no higher qualifications seem to be required than an ordinary degree of industry and perseverance, united to a medium power of discrimination and a fair proportion of good sense in bringing into due relation the facts and illustrations that are calculated, best to élucidate the subject of which it treats. The business of compiling and annotating constitutes to a great extent the trade of book making, and hence it is that in the substantial and useful departments of learning so few works appear that bear the impress of originality and independent research. Nor is the prevalent fashion in this particular altogether free from pernicious consequences inasmuch as it cramps genius, and restricts the area of thought, reducing to the character of mere copyists or servile imitators, all who follow it.

But to produce a work of intrinsic original merit is quite a different thing; here thought is unrestrained and the mind luxuriates in the unexplored regions of hitherto undiscovered laws and beautiful affinities. The result is discovery and additions either of new and important facts or of rare combinations of principles and laws already recognized, are made to the

aggregate of human knowledge. Thus has science been improved by the labors of Galileo, Kepler, and Newton. Thus too has medicine been amplified and refined by the ardent, original, and searching investigations of Harvey, Hunter and Bichat.

We have been led into this train of thought by a perusal of the book before us—a work which, though the subject is not new, evinces a depth of thought, a power of analysis, and a fund of practical observation that entitle it to a place among the first scientific productions of the age. Passing by the first lecture, which contains much that is valuable, we would call the attention of the reader to the second, which treats of softening of the coats of the stomach and the influence of the gastric juice on them after death.

In this the varieties of softening are distinctly set forth, as also the uniformity of location of each. The circumstances under which these, respectively, occur are distinctly defined, as well as their connection, as far as the present state of knowledge will allow us to affirm, with injuries of the head and a full meal recently taken.

In a medico-legal point of view, this lecture will be found to contain a lucid summary of such facts and doctrines as will enable the professional witness to testify in cases of alleged poisoning, in which certain post mortem manifestations have been discovered, with a certainty that will save courts and juries no inconsiderable amount of embarrassment, do justice to science, and confer honor upon the profession. The third lecture is devoted to the consideration of the "organic diseases and functional disorders of the stomach." It contains a great amount of practical matter, much of which is presented in such a form that the reader will be fortunate if he accepts the greater number of its paragraphs as fundamental aphorisms, and fix them indelibly in his memory. Speaking of hæmorrhage from the stomach, every thing in reference to which is treated with terseness and accuracy, the author observes: "The effects of congestion of the stomach are, however, somewhat different, as I have already hinted, according to the circumstances under which it occurs. When a great impediment to

the passage of the blood through the liver or chest is created rapidly, it is much more apt to cause hæmorrhage from the stomach than when it is created gradually and slowly—doubtless because in the latter case the blood vessels of the stomach grow stronger so as to better bear the additional stress upon them which they must do by virtue of the power which blood-vessels every where have of becoming hypertrified readily—that is, of growing rapidly stronger, or larger, whereby an altered condition of the circulation, tubes of greater strength of volume are required.

Again, "an impediment to the passage of the blood through the liver or the chest, if it be created rapidly, usually causes hæmorrhage from the stomach before it causes ascites: an equal impediment created slowly causes ascites before it causes hæmorrhage."

The three succeeding lectures treat respectively of "inflammation of the stomach, its various kinds or degrees and of ulceration of its mucous membrane. In these, the reader who seeks information that will guide him safely amidst the obscurity and doubt which envelope many of the questions connected with these recondite principles of pathology and practice, will find a store of well digested facts and doctrines the legitimate offspring of learned research and thorough practical observation.

In regard to the latter subject (ulceration of the mucous membrane) the instructions relative to diet, its therapeutical efficacy, the necessity of an intelligent discrimination in the use of purgative medicines and their accurate adaptation to different pathological conditions, and the remedial powers of oil of turpentine when hmæorrhage supervenes, &c.. will be found of great value when subjected to the test of practice. Most of the questions connected with this interesting, obscure and embarrassing malady are illustrated by pertinent cases, concisely stated.

The entire work consists of sixteen lectures, in which, in addition to the topics already referred to, Cancer, sympathetic disorders of the stomach, from remote irritations, deficient secretion of gastric juice, slow and imperfect digestion; ferment-

ation, with development of sarcinæ; indigestion from defective action of some one of the secreting organs, or some error in the nutritive processes in other portions of the body, certain forms of indigestion, characterized by peculiar symptoms, urticaria, pyrosis, indigestion of drunkards, general symptoms of gastric disorders, epigastric pain and soreness, vomiting, acidity in excess, flatulency, appropriate remedies in diseases of the stomach, as Ipecac, Bismuth, Vegetable astringents, Hydrocyanic acid, Alkalies, the mineral acids, Vegetable bitters, certain chalybeates purgatives, and general dietitic rules, are all successively and most ably treated.

That Dr. Budd has brought to light all the principles that pertain to the complex and important subjects on which he writes, we do not affirm; but that he has performed the task he proposed to himself, acceptably and faithfully to the profession, it is believed but few will question.

The work appears in the usual finished style of the enterprizing publishers, S. S. & W. Wood, N. Y., whose efforts in the diffusion of useful information are deserving of high commendation and liberal reward.

Found in this city at Raymond & Selleck's. K.

☞Our former benefactors, Messrs. Lindsay & Blakiston, of Philadelphia, have laid us under additional obligations by sending us a neat copy of the "Physicians' Visiting List for 1857." It is a remarkably convenient pocket companion, affording ample space, not only for entering the current business of the day, the moment it is performed, but also for memoranda of most if not all the incidental and collatteral circumstances and events of a physician's labors during the year. It merits, and will be sure to receive the hearty approval of every M. D. who desires order and accuracy in business arrangements.

EDITORIAL AND MISCELLANY.

Hospitals—Their Purposes, and Perversions.

The primative idea of Hospital advantages as handed down by the historian points to the first progressive steps of our science, a fact clearly recorded in the following: "The sick were directed to be exposed in public places to the view of travelers and strangers who were required to examine and compare their cases with such as might antecedently have fallen under their observation, and to recommend such remedies as had been known to produce beneficial effects in similar complaints. And when discoveries were thus made the precious remedies were held in veneration and the knowledge of them was conveyed by oral tradition, or recorded upon pillars in the most public places or on the walls of the temples dedicated to the God of Health; and afterwards registers of cures were kept in those consecrated places *for the general good of mankind.*"

From this account we may reasonably infer that the amelioration of suffering however benevolent in its import, was *not the highest object* for which Hospitals in their rudest simplicity were instituted; but the conception embodied a two-fold purpose, having especially in view *the record of new discoveries,* kept in the archives of temples consecrated to the God of Health, *"for the general good of mankind."* But our medical forefathers in bequeathing to us the legacy of a legitimate profession could claim for it little more than the fact that it was founded upon *logical deductions,* and at best transmitted with many crude notions—the rubbish—of the age in which they lived. The zeal and indefatigable labor, with which they improved and cultivated the rudiments of Hospital practice is

worthy of emulation, even in the last half of the 19th century. Hospitals though dedicated to the God of benevolence, in obedience to the demand, offered facilities for confirming or refuting the principles, and dogmas which constitute medical science. Thus provided it was only left for experimental philosophy to sift and seperate *truth* from the mere opinions of dogmatists. The faithfulness and the energy with which this work has been and is now being prosecuted, in other words the *improvement* of the advantages offered by Hospital practice, and due to the profession is worthy of thoughtful consideration.

Are not some of the Hospitals of this country at the present time, in the hands of cliques or colleges, who are making them subserve the interests of rival schools, or the more despicable purpose of elevating *"notoriety seekers."* If we should go no farther for illustration than point to such as have come under our immediate observation, no sane mind familiar with the facts, unless blinded by servile obedience, could find a negative answer to this question.

There never was a time when the facilities and appliances—the legitimate property of the profession—for the advancement of medical science, was so much under the control of medical demagogues as now. Taking the present for our guide, we may reasonably expect to find in a future "report on medical education," the timely suggestion of establishing in our medical schools a chair of *Medical Politics*, to be filled by an "emeritus professor," duly qualified by having *"been in the army,"* of dignified *exterior*, and above all a trimmer in party politics; whose peculiar duty shall be to *elevate* young men of indigent mental capacity, whose want of elementary education, had blighted their prospects of preferment. Moreover to make them obsequious to their elders, and more especially to him upon whom they are dependant for at least an ephemeral success. In short faithful minions who shall draw the mantle of charity over the fatal mistakes of Hospital practice, or the veil of ostentatious erudition over the blunders of ignorance; who shall be awarded by a permit to *"operate,"* and thereby *co-operate* with disease in hastening the unfortunate victims of misplaced confidence, to a place in the Potters field. Victory over disease achieved by death !!

But how have the profession and community been hoodwinked, or wheedled into a tolerance of the existing facts, which evince a sad perversion of facilities which were first dedicated to the progress of science? If we turn to the pages of some of our cotemporaries, for the answer to this question we shall be disposed to believe that much must be attributed to associating Hospitals with schools whose highest aspirations seem to be to graduate the *greatest number* of students; whose professorial chairs have been bought by the pampered sons of wealth for the sake of the honor which the *chair* reflects. But how much more must be charged to the fact that most of the Hospitals receive their appointment from Government and are therefore dependent not upon the standard of merit and qualification but upon the fluctuation and wirepulling of politics. Fortunately we have some worthy exceptions, to this rule; Hospitals that through industrious and competent teachers reflect honor upon the reputation of science in our country, by giving back to the profession the results of *intelligent clinical practice*—full reports of cases with their treatment and results.

But when it is found that some of those institutions uniting philanthropy with the best interests of medical science are in the hands of *cliques* whose instincts prompt their efforts to no higher object than self-aggrandizement—leading them in their post-mortem investigations to take the "lions share of the carcase" for lithographic advertisement of blind and *reckless* surgery, we have reason to fear that the progress of science so far as dependent upon Hospitals must be tending to a pitiful degradation. Unfortunately we have a few army veterans in the profession, who crept into the medical staff at a time when men of a very ordinary attainment could pass the examining board; but when the time of *trial* came—the modification of the laws requiring a higher standard of qualification—these gentlemen respectfully declined the ordeal, choosing rather to take the *hint* and leave the army.

But the fact that they "*have been in the army,*" serves them in their dotage as a sort of government patrimony, a sinecure, in short a potent reason why they should monopolize all hospital advantages and hold dictatorial sway over the whole profes-

sion. Their policy is the same as that of "the dog in the manger." If surgeon to a Hospital they will ride up to St. Marys, St. Anns, or some other saints hospital, three hundred and sixty-five times a year, walk the wards, casting here a penetrating look, there perpetrating "a rich joke," and then prescribing like *an automaton*; and all for what? the honor and glory!! They pass for men of learning, but where is the evidence? Is it in there wise look as they make their hospital rounds, and order a stereotyped formula of hydrarg, cum-creta and dover, or hydrarg, cum-creta and quinine? Nay! they are *overestimated* in the profession, their attainments and working capacity being inferred from their technical verbosity, their officious and and ostentatious zeal, applied for self promotion. And when their biographical remains shall be gathered up for immortality, in the archives of the profession, that which will live longest in the picture gallery of memory will be A PLASTER PARIS BUST! a monument of self love,—a "shadow without the substance."

But when these "figure heads" of the healing art, shall have passed away to be forgotten and their satelites shall have dropped down into their appropriate sphere then may we hope to see our hospital advantages cultivated by men who have not prostituted their intellect, but are zealous for the progress of science and inspired by the memory of Harvie, Hunter, and Cooper.

These charitable institutions receive liberal appropriations annually from our general tax fund, and private donations. Their object aside from professional interest is such as to appeal to the benevolent impulses of every physician who is true to his mission; if permitted then under proper regulations would he refuse to take the medical supervision of a ward or a setion, for a prescribed period of time, in turn with honorable associates in the profession? There is moreover in such an opportunity, an appeal to praisworthy ambition—a promise of success to well directed effort in the labor of adding to the aggregate of practical information, by studying the laws governing disease, and the action of drugs in their remedial application under the most favorable auspices.

Accidental circumstances which too often opose the efforts of the physician in general practice—such as are incident to poverty or location—are not here, the fruitful sources of complication, adding discouraging features to the physiognomy of disease; but every comfort which the "Sister of Charity" can bestow, little short of maternal vigilance, every convenience or mechanical appliance which practical learning can suggest, is here made to contribute to the success of medical treatment.

If then we are to realize benefits at all commensurate with the legitimate purpose of Hospital advantages it must be through the active, working intelligence of the profession, and not from the obsolete remains of army distinctions.

Instead of imposing the duties of physician and surgeon upon *one* man *supposed* to possess the requisite wisdom and skill to attend to the ills and accidents of suffering hundreds, (while at the same time doing justice to an old *promiscuous* practice, as in a familiar example under our own observation which has furnished us with so many apt illustrations,) we would propose the same general plan that reflects credit upon the Hospitals of other cities. Open the doors to the whole profession, and appoint a given number of physicians who shall have the exclusive and independant control of a ward or a section of a ward for a prescribed time.

Let there be a staff of physicians and surgeons who shall have a general supervision, and serve in hospital consultations. This plan with such modifications as circumstances may indicate, gives advantages not to one or two men, but to such members of the profession as are worthy and qualified to improve them by studious and systematic observation of the phenomena of disease, the effects of new remedies, confirming or refuting by demonstrative evidence, popular theories and doctrines, in short making such advantages subserve the purpose for which they were originally intended,—"the general good of mankind."

But it requires no elaborate argument to prove that such a division of labor is absolutely requisite in order to realize the greatest benefit from hospitals; this point will be conceded. It only remains therefore to point out those institutions which are under the illiberal and exclusive control of a "one man

power," and leave the profession to award its honors, not according to notoriety, or accidental distinctions, but according to real merit. R.

Peninsular Journal.

We did not intend to resume the personalities which appeared in our last number, provoked by an attack upon our senior, Dr. Goadby; but inasmuch as the senior editor of the Peninsular Journal has disclosed the *"motive"* which actuated him in making the attack we can do no less than state the facts which gave origin to the alleged "exciting cause."

Be it known that there is an institution called the "Detroit Medical Society." Originally organized by and under the exclusive management of the junior members of the profession in this city. For a few years past it has been in successful operation, and even though "Snob" ridden it has contributed not a little to the enjoyment, if not the profit of its members. In May last it was moved that the older members of the profession who, up to that time had been only members by invitation, be elected members in full with all the privileges and prerogatives pertaining thereto. This was accordingly enacted and subsequently Dr. Goadby presented the name of a Doctor for membersip—making a strong appeal in his behalf; this proved to be an "apple of discord" giving rise to an intemperate discussion which at one time was a little *above boiling point.* The tempest abated however, and a committee was appointed whose duty should be to investigate the merits of the case and report at the next meeting. In due time the report was made and presented two points for the consideration and action of the society. The first was the unqualified rejection of the name proposed for membership, the other a gratuitous protest against the remarks made by Dr. G. The first point was received and adopted; with regard to the second point, it was moved that Dr. Goadby be requested to withdraw from the society, whereupon an amendment was offered *by one of the editors of the*

Peninsular Journal and supported by another of *the same family* that Dr. Goadby be *expelled* from the Detroit Medical Society. This was all done at a time when Dr. G. was absent from the city, his friends also absent from the society, and under a constitution, and by-laws which provide no rules of discipline for offending members, either by expulsion or otherwise. Now in the name of "common sense" do not such procedings evince either gross ignorance of all parliamentary rules, or a *malicious intent?* All things considered which is the most probable? The great head of the American medical association has been felicitating himself over a "smart thing," another *"rich joke,"* perpetrated by a *pair* of his junior editors, but for the sake of the position of that *ass*tute editor we shall forbear further comment upon the rejoinder, leaving him to appropriate all the capital which he has made in seeking to prejudice the mind of his readers against the character and and attainments of Dr. Goadby.

"It is in the nature of man to hate the individual he has injured."

What does it mean?

The last number of the Peninsular Journal contains an editorial item whith has the appearance of being pregnant with great events; if we are correct in the diagnosis it either means a great deal, or like many others which have preceeded it, it means *nothing.* It is headed "University affairs—Pay of the faculty of Arts &c.," and after speaking of the increased appropriations for the maintenance of the Faculties in the various departments, says further:

"The precise amount of this increase we do not know now, but shall be duly informed when the time comes for the board to make its annual report to the legislature. But if the aggregate of compensation awarded is only a just measure of the talents and acquirements employed in the service of the state we have no fault to find with the action of the board in that regard. As a rule, we believe this is the case, but to this as to

many *other* general rules we believe there is in the University *an exception*, which we designed at this time to point out. But on more mature reflection we have deemed it best *for the University and the individual most interested* not to be more explicit now, in *the hope that measures may be taken which will obviate the necessity of any further allusions to the subject.*"

The italics are our own and indicate that portion of the paragraph which the author ought to have translated. What does this sélf constituted organ of the University mean? A crusade against some individual of the medical faculty that is paid too much, or sympathy for some one that is not paid enough? Or is it a dread threat diguised in inuendo, to whip some offending member into the traces, if not eject him *without a reason.* We trust, for the sake of the reputation of our University that a little "*more mature reflection*" will prompt the author to relieve his readers from a painful suspense.

Health of Detroit—A severe epidemic.

For several months past, our city, and so far as we can learn the whole state has been visited with one of the most *disastrous* epidemics; technically classified in the nosology of Webster, under the head of *Eupathy!* Unlike other epidemics, *physicians* have suffered most—the point of an attack being about the inguinal region, in a cul-de-sac, called the pocket.

The following table taken from the record of interments in Elmwood Cemetery for the month of August, making an aggregate of only 58 presents a fair indication of the amount of mortality, and the class which has suffered—

Dysentery	15	Child bed	1
Cholera Infantum	15	Accident	3
Inflamation of the bowels	5	Old age	1
Scarlatina	2		—
Diarrhœa	2		56
Billious Fever	1	Children under 1 year	28
Consumption	6	" " 2 "	13
Disease of the heart	1	Still born	2
Cramp	1		—
Epilepsy	1	Aggregate of children	43

The other Cemeteries we learn presents a mortuary record

of about 120 and with about the same proportion as respects age, and disease.

Our general estimate then, would show for the month an aggregate of about 176 deaths, out of a population of over 60,000.

Our contributros from the country assure us that as soon as they *resume* busines and meet with a few cases of disease they will report.

Consistency!—Among the many announcements of Medical Schools which we have received during the past month we find one from the Eclectic Medical Institute of Cincinnati. Moreover we find that it carries on the back of it, among puffs from the secular press, a very laudatory notice of the materia medica of the Eclectic practice, *given by the Peninsula Journal of Medicine*, whose senior editor is so jealous of the legitimate school of medical science that he even jumps at conclusions, in order to arraign before the [redacted] of medical ethics, such men as David Humphreys Storer, of Boston, for fear he may have loaned his name to Homeopathy. *Tempus omnia revelat.*

Correction.—In the July number of the Independent, noticing a pamphlet on "the treatment of Aneurism of the Arteria Innominata, by Ligature of the Right Common Carotid Artery," we carelessly overlooked the author's name, and closed our article with the following: "Finally, we regard the work as a valuable contribution to surgical science, and worthy the signature of the author, which, for some reason, has been withheld." At a subsequent date the author, W. M. Wright, M. D., L. R. C. S. E., Professor of Materia Medica, McGill University, Montreal, C. E.. respectfully called our attention to the oversight. We cheerfully make the correction, but at the same time beg to offer our opinion that the work is worthy the signature of the author on the *title page,* rather than in an obscure foot note.

On our Table.

We have received from the publishers, Harper & Brothers, New York, a handsome volume of more than six hundred pages, entitled "Human Physiology," statical and dynamical, or the "Conditions and Course of the Life of Man," by John William Draper, M. D., L. L. D., Professor of Chemistry and Physiology in the University of New York.

Our thanks are due for the favor, and a full notice of it will appear in our next.

☞We are pleased also to acknowledge the receipt of a well executed pamphlet entitled "Essays on the Phylosophy of the Nervous System," with an appendix on Hydrophobia. The author, Benjamin Haskell, M. D., Rockport, Mass., will please accept our thanks with the assurance of a notice in our October issue.

On the Evils of Consanguinity in Marriage. By Dr. Rillett, of Geneva.

A letter from the author, containing a statement of his researches in reference to the influence exercised by consanguinity upon the offspring of marriage, was read before the Academie de Medicine at their sitting of the 13th of May. The substance of the letter was: that at Geneva a considerable number of marriages take place between relatives; that attention has during many years been attracted to the unhappy consequences resulting from this circumstance, and affecting the health and even the lives of the children. These consequences are, first, absence of conception; 3rd, imperfect conception, (miscarriage;) 4th, imperfect offspring, (monstrosities;) 5th, offspring more specially liable to diseases of the nervous system, and in order of frequency: epilepsy, imbecility or idiocy, deafmutism, paralysis, various cerebral diseases; 6th, a lymphatic offspring predisposed to the diseases which spring from the scrofulo-tuberculous diathesis; 7th, an offspring which dies at an early age, in a larger proportion than children born under other circumstances; 8th, an offspring which, if it passes the first period of infancy, is less capable than others of resisting disease and death. To these rules there are exceptions, due either to the state of health of the progenitors, or to the dynamic conditions in which the parents happen to be at the time of connexion. Thus: 1, it is seldom that all the children escape the evil influence; 2, in the same family some are affected others are spared; 3, those who are affected are almost never similarly circumstanced in the same family—that is to say, one is epileptic, while another is a deaf mute, &c.—*Dublin Med. Press from Gazette Medicale.*

Lines Addressed to a Skull.—The following beautiful verses were found in the skeleton case of St. Bartholomew's Hospital more than thirty years ago, placed there by some unknown hand. Breathing alike the true spirit of poetry and religion, we take pleasure in perpetuating this anonymous production:

Behold this ruin! 'twas a skull,
Once of æthereal spirit full;
This narrow cell was life's retreat,
This space was thought's mysterious seat.
What beauteous pictures filled this spot!
What dreams of pleasure—long forgot!
Nor love, nor joy, nor hope, nor fear,
Has left one trace or record here.

Here, in this silent cavern, hung
The ready, swift and tuneful tongue;
If falsehood's honey it disdained,
And where it could not praise, was chained;
If bold in virtue's cause it spoke,
And gentle concord never broke;
A tuneful tongue shall plead for thee
When death unveils eternity.

Beneath this mould'ring canopy
Once shone the bright and busy eye;
Yet start not at the dismal void!
If social love that eye employed;
If with no lawless fire it gleamed,
But with the dew of kindness beamed,—
The eye shall be forever bright,
When stars and suns have lost their light.

Say! did these fingers delve the mine?
Or with its envied rubies shine?
To hew the rock or wear the gem,
Can nothing now avail to them;
But if the page of truth they sought.
And comfort to the mourner brought;
These hands a richer mede shall claim,
Than all that waits on wealth or fame.

Avails it whether bare or shod,
These feet the path of duty trod?
If from the bowers of mirth they fled,
To soothe (?) affliction's humble bed,
If grandeur's guilty bribe they spurned,
And home to virtue's lap returned:
These feet with angels' wings shall vie,
And tread the palace of the sky!

—*American Medical Gazette.*

Erratum.—In the last number at page 330, for 30 *per cent.* of silica in the earth, read 80

THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

VOL. II. OCTOBER, 1856. NO. 2.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links Connecting the Vegetable and Animal Kingdoms.—Continued. By HENRY GOADBY, M. D., F. L. S.

We will now endeavor to see how far *flinty* forms are met with in the Animal Kingdom. In page 133, we have already directed attention to some remarkable forms found in fresh water, some of which are entirely, or partly green, while others are of a "greyish color," (figs. 22 and 23.)

These organisms are composed of *two valves*, like a bivalve shell, with generally a line passing through the centre, which, in some species terminates in perfectly rounded bodies at either extremity. The whole of this central apparatus appears to display flinty (or siliceous) matter in greater substance than ordinary; the terminations, too, appear to be lenticular bodies of solid silica, as we have frequently seen a very minute figure of the flame of our lamp, together with the wick-holder and glass, clearly distinguishable in these bodies. We first saw this sight six years ago, in Philadelphia, by an adjusting half inch object glass of Powell & Leland. Our figure (72) displays one of the lenticular bodies in the *centre*, those at either end were

overlooked by our artist. Closely allied forms are shown at figs. 73 and 74; in all these structures one character prevails, viz: the *lines*, more or less delicate, which radiate from the central line to the other margins. In many of the forms belonging to this group, the lines are so exceedingly delicate as to constitute some of the severest tests of the quality of an object glass; much, however, necessarily depends upon the *quality*, and *management of the illumination*, for the elimination of these lines.

Fig. 72.

In fig. 75 we have a magnified view of a fossil from the Paris basin—Biddulphia pulchella—evidently divisible into *three* distinct parts, a central and two lateral portions. The slide in our possession, from which the figure was obtained, contains these fossils in all stages of sub-division; the end pieces are sometimes with their back to the observer—sometimes they present the surface which originally formed a junction with the other portions of the fossil. An end piece of this description is shorn at fig. 76, by reference to which it will appear that the interior presents a distinct *hollow*. Another form, composed of a series of joints, each joint, however, being a perfect organism, is found in the Gallionellæ. The specimen figured at 77 was obtained from the estate of the Earl of Roden, on the banks of the Upper Bann, County Down, Ireland.

Fig. 74.

It happened that one summer, about sixteen years ago, his Lordship was entertaining a party of friends at his Irish seat. The guests daily noticed that the plate had an unusually brilliant polish, and one day some one asked the butler what "plate powder" he used to make his plate appear so beautiful. After a little hesitation he confessed that he used a fine earth found on the Earl's estate, on the Upper Bann. The Dowager Countess Caledon, who was of the

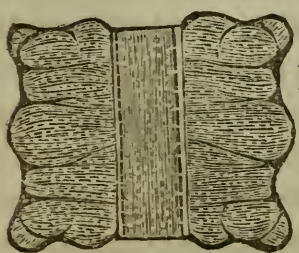

Fig. 75.

party, desired to see a specimen of it, and, submitting it to her microscope, found the polishing power to reside in the minute particles of the Gallionellæ, and other minute fossils. But for this curious accident, the very interesting fossils of the Upper Bann would have remained unknown to science.

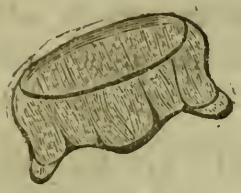

Fig. 76.

The far-famed Tripoli, and other earths renowned for their polishing capabilities, owe these qualities to the like cause; they invariably present, when examined by the microscope, the débris of various organisms, chiefly minute, whose structure is wholly siliceous, and whose surfaces are characterized by peculiar processes, or ridges, or elevations of some kind, of the flinty material of which they are composed.

Fig. 77.

The Peruvian guano, when macerated and boiled in strong nitric acid, displays a number of singularly beautiful forms, all of them silicious.

Amongst them are found the elegant engine turned forms, (Coscinodisci) so abundantly met with in the celebrated fossil earth of Richmond, Virginia, and other kindred fossils. But the guano contains one specimen of extraordinary beauty—the Arachnoidiscus Ehrenbergii (the spider's web disc,) which, with regard to the mathematical care and precision of its details, renders it a charming object.

From the centre to the circumference are twenty-four radiating lines (our artist has only represented twenty-three,) which, by their symmetrical arrangement, compare admirably with the web woven by the Epeira diadema, (the garden spider) from which circumstance it takes its name, (*Arachna*, spider.) This is shown in fig. 78. The Arachnoidiscus is not to be regarded as a *fossil*—for, on the contrary, it is strictly recent, and should be found in the neighboring seas; moreover, it is found attached to sea weeds obtained from

Fig. 78.

different parts of the world. We have described *twenty-four radii* as belonging to the specimen we preferred to figure, but, in reality, scarcely two of them are found *precisely* alike. We have in our cabinet a number of these forms, which differ as much in size as in general details.

A large tract of earth, known as "Scotland," in the Island of Barbadoes, furnishes a great number of fossil forms of more than ordinary size, and remarkable no less for the singularity of their forms than for the great size of the tubercles, or hollows (as the case may be,) which cover their external surface some of these are shown in figs. 79, 80, 81 and 82.

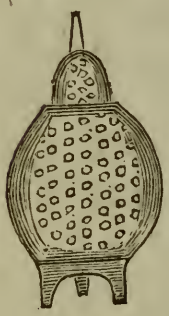

Fig. 79.

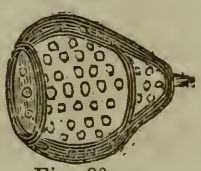

Fig. 80.

In the Kingdom of Saxony, there is a mountain of great extent, composed of a white pulverulent earth. In times of scarcity, the inhabitants have been wont to collect this earth, and, mixing it with equal parts of meal. make it into bread. It is called Bergmehl, or mountain meal, and tne people testify to its salubrious qualities, which must depend upon the slight degree of irritation of the mucous membrane of the stomach and bowels, occasioned by the presence of minute particles of silica. These organisms are known as the campilodiscus clupeus, and shown in fig. 83—like all its congenors, it is composed entirely of silica.

Fig. 81.

Fig. 82.

Other curious forms are found fossillized and imbedded in flint. Take a piece of common flint, (a gun flint, for example,) split it into moderately thin sections, and then grind them down thin enough to show anything contained in their interior. The chances are that forms like those represented in figs. 84, 85 and 86, or some kindred and closely

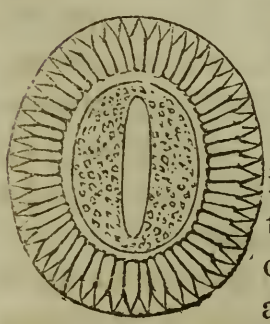

Fig. 8 .

allied forms, will be seen. These bodies are known as Xanthidiæ.

We have now collected considerable evidence of a great variety of forms, fossil andrecent, all belonging to the fresh or salt waters, but what are they? Can they be regarded and classed with animals, or are they plants?

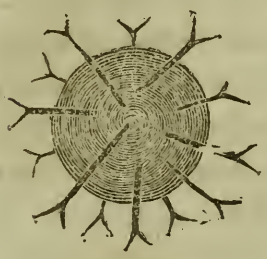

Fig. 84.

Ehrenberg, originally settled the question by declaring for the animality of *all* these bodies; and having made the assertion, he has never been willing, even in sight of irrefragible evidence to the contrary, to retract it. But can any one believe it to be possible that forms such as we have portrayed can have belonged to this group of vital organisms. Who, for example, has ever seen, or can understand an animal such as Biddulphia pulchella—(fig. 75)? Passing other strange varieties of form, we come to the remarkable Barbadoes fossils, and here we ask if any one has ever seen an animal shaped like a china jar, standing on three legs, and provided with a cover? Yet we have demonstrated such in fig. 79. In fig. 80, which represents one portion of such a fossil, we have clearly demonstrated its *hollow* character.

Fig. 85.

Fig. 86.

But the most remarkable of all these forms is seen in fig. 82, where we have a globular something with a long (broken) tail, the summit of which is very peculiar. We find that one side is acuminated, and the centre of this process is furnished with an *eyelethole.* Surely, such must be very grotesque animals!

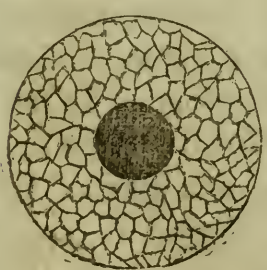

Fig. 87.

The figures drawn from the flint have been supposed by some authors (Sir J. G. Dalyell, Raspail, and others,) with great apparent probability to be the ova of certain highly organized fresh water polypes.

Unquestionably, the ovum of Cristatella mucedo bears remarkable analogy to these

bodies. Both are provided with a series of hooks, whereby it might cling to aquatic vegetation, and thus remain at rest during the dreary months of winter, and until the genial sun of spring encourages the development of its internal germ. We confess ourself to have been amongst those who believe in the Polype origin of these, and allied forms; but we have subsequently seen reason to change our opinion, and proceed to adduce the evidence upon which our altered convictions are founded. Three years ago we were in Cobourg, C. W., and made a visit to the "Rice Lake." While there we found a magnificent specimen of plumatella, (a highly organized fresh water Polype) which we conveyed to Toronto, for further examination. In the prosecution of our sections of the Polypodem, we found several specimens of Xanthidiæ, and they were, moreover, in three distinct stages of delvelopment. Our mind recurred to the beautiful and extraordinary development of Cristatella, and we concluded that some interesting facts awaited us in relation to the successive stages of the ova of plumatella—of course, these bodies were inevitably the germs of that animal.

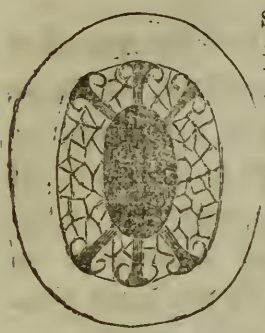

Fig. 88.

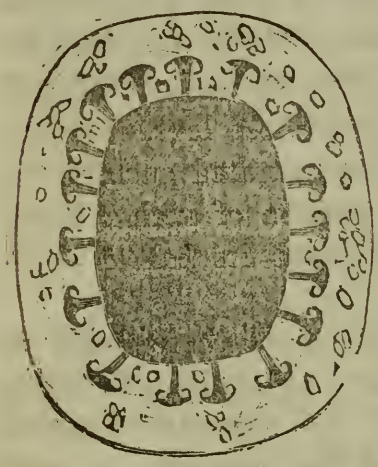

Fig. 89.

We found, for example, that the presumed ovum of earliest stage, (fig. 87,) presents a circular, very opake, central mass; around it a beautiful structure of pentagonal cells was display ed. In the second stage (fig. 88,) the central mass had grown exceedingly, and became oval, or cushion shaped, instead of round. Moreover, at the upper and lower portions three well formed hooks were found—six, altogether. In addition to these changes, the dense congeries of cells of the first stage had become greatly reduced in size, but partaking of the figure of th ecentral mass, and around and beyond it was a beautiful hyaline membrane. In the third, and last stage, (fig.

89,) the central mass, retaining its cushion shape, had greatly increased in size; the hooks, too, from six in number, had become seventeen, and of greatly enlarged dimensions. The cells were all obliterated, but the hyaline membrane, much increased in size, remained. But what are those groups of minute spots on the hyaline membrane–are they particles of extraneous matter clinging to it ? Doubtless they are, and so with a camel's hair pencil, and some trouble, they must be removed, and leave this charmingly delicate membrane as clean as it is transparent.

But another, and another specimen of the mature organism continues to show these disfiguring spots—what can they possibly be? There is now nothing left, but to *increase the magnifying power, and see what they are*, and behold, they are copuscles of starch !

The hilum and concentric lines are both there; whilst in form and size, they more nearly resemble potato starch; tested with tinc of iodine, the iodide of starch results. The lovely vision. with its bright anticipations that had flitted before our mind, was suddenly annihilated; the interesting ovum of plumatella stood revealed a lovely vegetable ! Having the key to the exact truth in our possession, we next examined the dark portion of the the three specimens as opake objects, and found *the vegetable cells*, formerly seen by transmitted light alone, diffused over their entire surfaces.

This organism, at least, is a vegetable; and in its mature condition produces (in common with *all* plants,) starah. We think its affinities are such as ally it *closely*, if not entirely to Xanthidiæ; and consequently conclude that, if our *recent* specimens be vegetables, the Xanthidiæ of "the long past" were vegetables also.

The disputed ground between the Animal and Vegetable Kingdoms is by no means exhausted; we have yet to examine other and pertinent forms.

To be continued.

ARTICLE II.—Physiognomy of Disease.—Continued.

In resuming our remarks upon the Physiognomy of Disease, we propose first to treat of the aspects which present to the observation of the practitioner in the diseases of infancy and childhood, and their significance.

"There is a marked difference," says an accomplished writer "between the facial expression of one laboring under violent pain in the head, and one suffering from excruciating pain in the abdomen, even in the adult. Less degrees of pain are, of course, disregarded and it is only in severe cases that physiognomy can be made inservient to diagnosis, but in the infant which readily gives expression to any pain or uneasiness, the countenance is an excellent medium of discrimination and will frequently indicate at the first glance the seat of the derangement."

Speaking generally, it will be observed that the acute forms of disease impress upon the physiognomy of the child alterations so different from the placid cheerful expression of health, as not to escape the notice of the most indifferent observer.

These will be more or less distinctly manifest as the attack is more or less severe; and one section or other of the countenance will be changed or distorted, according to the particular apparatus or organ affected by the disease. Hence,as observed by another,in diseases of the brain,the upper part of the face—the forehead and the eyes are chiefly affected; in diseases of the thoracic organs the middle portion of the face, and especially the nostrils; while in those of the digestive organs the lower part of the face—the mouth and lips, are the parts which undergo the greatest changes in their expression."

This is announced as a general, not as a rule that obtains to the letter in all examples. What then are the principal characteristics of the diseases of these several sections of the body, in infancy and early childhood as thus manifested in the facial expression? What are the conclusions to which they lead, as regards diagnosis? and to what therapeutical inferences do they legitimately give rise?

The existence of *pain* will in almost all examples be indicated by some more or less distinctly marked expression of the countenance.

The *particular expression*, will be somewhat various, and more or less completely expressed, and permanent or periodic, in proportion to the severity, and the length of continuance, of the suffering. If then, as expressed by the learned and observing Hall, "the brow be contracted," if the face and especially the upper portion be flushed, if the little patient close the eyes, or seek to shade them by the hand or arm, when exposed to a moderate light, the practitioner may with great propriety predicate the existence of inflammation, or of a grade of irritation,that approximates it, and is soon to merge itself into unequivocal inflammation.

If on more particular examination, he finds these facts associated with inordinate heat, unusual action of the temporal and carotid arteries, or if from the early period of life, the anterior fontanelle be not closed and the longitudinal sinus be pulsating with more than common activity—moreover, if the pulse be hurried, full and resisting, the tongue covered with a white fur, the bowels torpid and the respiration rather protracted, and sighing at intervals, he will feel assured that his impressions derived from the physiognomy are fully verified.

The judicious practitioner however,will not suspend his investigations at this point–he will interogate the abdomen; ascertain its condition as regards fullness, hardness tenderness, heat &c., and query whether all these cerebral manifestations may not be symptomatic of some irritation or derangement, located there. The actual location, and character of the diseased action, thus, analytically established—in other words, his impressions derived from the physiognomy,confirmed by concomitant symptoms, the general character of his therapia will at once be obvious and more especially if he has distinguished accurately the existing diathesis. He will have no hesitancy in concluding that the required treatment must be more or less actively antiphlogistic and derivative, and that the regimen, in all particulars as regards food, rest and the complete abstraction of every circumstance, tending to produce, or augment excitement must be

of a like contra-stimulant kind. In this connection we should do injustice to the subject to overlook a physiognomical aspect which is significant of prospective iminent danger, and which the inexperienced practitioner may not observe, in its fullest import. It consists of flushings of the entire face, alternating with paleness recurring at uncertain intervals, but becoming more frequent and protracted as the case progresses, portending in our observation the gravest form of infantile convulsions. Such then is its significance, which will be confirmed if after an indefinite, period the respiration be simultaneously embarrassed, if the expression of the eye be wild, staring and anxious, with rapid spasmodic movements of the palpabræ and dilated pupils, and more especially, if there be rigidity of the extensor muscles of the extremeties accompanied by, carpopedal spasm of the smaller joints. Pathologically, the disease, no doubt results from profound lesion of the cerebro-spinal axis, associated perhaps with a diseased condition of the ganglionic system of nerves.

As regards treatment we can only say at this time that the phenomena thus physiognomically described, and the result, of which they are the uniform precurser, viz: convulsions, all demand the energetic use of such measures as allay nervous irritability equalize the vital forces of the economy correct the secretions, and promote general strength. An intelligent discrimination in the selection of remedial measures will be requisite, and the most vigilant attention in carrying them into operation.

Allusion has already been made to the conditon of the middle of the face and nostrils, in diseases of the respiratory organs and it may here be observed, that what is true in this respect in infancy and childhood, is no less true in adults and particularly when the disease is severe. If then, there be an expression of grimace or something nearly allied thereto,and almost constant or recurring at short intervals accompanied with "sharpness of the nostrils" *i. e.* a pinched aspect of the nose, or an alternate extraordinary contraction and expansion of them, the first impression of the medical observer will be that some form of pulmonary disease is present. If on further examination

there be hurried and laborious breathing,or if inspiration be stinted and catching, and expiration rather blowing, with a strong inclination to lie on one side, in preference to the other,more or less of cough, hurried pulse and febrile heat, he will find his primary impression of the nature and location of the disease, emphatically confirmed. The particular form of diseased action will be determined by other and concomitant facts, and deductions from physical signs, measurement, succussion, palpation, &c., and the general plan of treatment will be determined by the precise location and character of the disease. Diseases of the abdominal organs, impress upon the features of the patient, no less striking and signifinant characteristics and as already remarked, these are usually observed in the lower portion of the face, and particularly about the mouth and lips. Spasmodic and other affections of the diaphragm, and painful disorders of the stomach and bowels, often induce equally characteristic features. So also chronic diseases, and such as originate in or give rise to deterioration of the circulating fluids, and during which the system is insufficiently nourished. Irritation of the stomach and intestines, as, also certain specific diseases and the cachexia in general, induce remarkable modifications in the expressions of the lower portions of the face, while certain other forms of abdominal disease fix upon the features at large, an expression so marked and peculiar as, if intelligently studied, can not fail to aid essentially, in the diagnosis. Hæmorrhages,anæmia, and uterine diseases, impress the mouth and lips with appearances, in no degree less striking and peculiar, than most of the foregoing nor would we forget to mention, in this connection, the influence upon this portion of the face, operated by most diseases, in which the blood is imperfectly changed by the process of respiration. When therefore, there is retraction of the corners of the mouth,to "such an extent as either to similate,or actually to produce the sardonic grin," the experienced physician will, at once, have his attention directed to the condition of the diaphragm, and abdominal viscera, and on duly considering the concomitant symptoms, will scarcely fail to discover the existence of spasm, or phlogosis of that organ, or some other abdominal organ, which is either intrinsically laboring under

some distressingly painful disorder, or complicated with disease of the diaphragm.

Likewise, when the lips are remarkably thin retracted and tense, as if tightly "stretched over the gums" accompanied by the "linea nasaliss" of Jadelot,and De'Salle, *i. e.* a wrinkled, or semifolded aspect of the cheek "beginning at the upper border of the Ala Nasi, and extending more or less curved to the outer margin of the Orbicularis Oris" the professional observer will not fail to associate such appearances with some form of blood disease, as phthisis or cancer or some obscure abnormal condition of the digestive, or assimilative functions giving rise to deterioration, in the quality or greatly diminishing the quantity of the blood. If the upper lip of a child be found tumid, without accident, or other cause to account for it, he will be led to suspect irritation from worms. Moreover, if the abdomen be enlarged accompanied by variable appetite, an irregularly recurring diarrhœa, and a milky appearance of the urine, he will regard his first impressions derived from the *facial* aspect as unequivocally established.

It is true too that the scrofulous diathesis, is characterized by tumidity of the upper lip; and, associated with the light blue eye, habitually expanded pupil, languid circulation, relaxed or flaccid muscular fibre and glandular swellings, the idea first impressed by the physiognomy, of the existence of the strenuous habit, will not be found eroneous. Extreme palor of the prolabia with dryness and fissure of the lips, and an anxious epxression of the whole countenance, will, at a first glance, awaken the suspicion of Anæmia, or more or less protracted hæmorrhage from some source—in the female from the uterus, in the male, from the rectum; and, in most examples, a critical search for other associated symptoms will determine the accuracy or falacy of such suspicion. On the contrary a dark or "purple hue" of the prolabia and particularly, if the lips be swollen, will not fail to direct the prescriber's attention to the condition of the heart and lungs, and induce thorough investigation for the true cause of the phenomena. If the patient reside in a malarious district and climatic influences be favorable to the production of congestive fever, its phenomena may present; otherwise the lungs

may be profoundly congested, or the heart may exhibit some organic abnormity.

An intelligent consideration of other sensible manifestations, and of the appropriate physical signs will confirm, with emphasis, the impression excited by the aspect of the countenance, and the indications of treatment will be apparent. A popular writer observes "the *hue or color* of the countenance should be noticed. A pallid or anæmie tint attends all diseases caused, by, or giving rise to poverty or thinness of the blood, with a deficiency of the red corpuscles; a generally diffused redness of the face attends inflammatory fevers, in their early stages, a dark murky tint shows a morbid condition of the circulating fluids, and a continued sallowness, is common in the diseases of the liver."

We here remark, however, in regard to mere flush of the face, as indicative of febrile action, we have seen serious error committed not only by nurses, and non-professional persons generally, but by physicians.

Now, that redness of the face is a common attendant upon fever, we do not dispute, but *that fever always obtains* during illness, when the countenance is florid, does not accord with our observation. Nothing perhaps,is more common than to see the face of an individual, of light complexion, whose skin is of delicate texture, and especially if the nervous, or nervo-sanguineous temperament predominate, when covered in bed, even though the indisposition be slight, or in progress of convalescence,considerably flushed. The error of diagnosticating fever from this fact alone, will appear obvious. Nor will the duty of the physician, not to predicate the existence of any disease without a close examination of all the phenomena of the case, be less obvious. K.

To be continued.

Medical Staff of the U. S. Army.—A medical hoard to consist of surgeons C. A. Finley, S. G. J. Decampt J. J. Wright, will assemble at St. Louis, Missouri, on the first of Nov., 1856, for the examination of applicants for admission into the medical staff of the United States Army.

ARTICLE III.—Rheumatism. By Wm. Cowan, M. D.

In resuming the subject of Rheumatism, I will endeavor to show that there are other causes than those generally enumerated by authors to account for this disease; and in doing so will also try further to prove my position assumed in a previous paper, read before the Detroit Medical Society, that Rheumatism is Leipse a blood poison, and the better to do so will give you record of the cases which have occurred to me since the writing of that article which are still fresh in my recollection, and of which I have kept a faithful record. They more fully bear me out in my beliaf of that doctrine than any of those I have seen heretofore in the city. It is well understood that nothing is more liable to derange the economy of the non-parturient female than irregularity of the catamenial function, and nothing which more quickly shows its health depressing effects in various forms of disease; and among these effects I would now be very much inclined to class Rheumatism as one. It cannot, I think, be denied that, in chlorotic women the blood becomes poisoned from the retention of the discharge; (menstrually) and if that be so, and it can be proved as I think, the following cases will show that chlorasis had any thing to do with the production of these cases. I then think it must also be conceded that I am correct as regards the poisoned blood in Rheumatism. Not only so, but even the analysis of a quantity of the urine of a patient suffering from Rhematism highly charged, as it often is, with uric acid, urate of amonia, the earthy phosphates and other deposits of Lithates which must come into the urine from the blood, and from that source alone, by whatever secret process of chemistry, which to us must remain concealed, they arrive there, all tend to prove conclusively the blood-poison nature of this disease.

Case 1st.—M. S., Æt. 21, unmarried, 30th June, 1856. Complains of pains in the neck and back, and flying pains all over the body, occasional rigors, followed by flushes of heat, skin very dry, tongue slightly coated, bowels constipated, catamenia irregular and very scanty, urine scanty and high colored.

Ordered a purgative of Calomel and Jalap.

℞. Sulph. Quinine, gr. XXIV.
Acid Sulphuric, Ar. Q. S.
Aqua 24 oz. XXIV. M.

Cyatho fino sumat quatuor in die.

For two days she seemed to improve, and the pains were less severe, when she was suddenly seized on the 3d of July with a very severe cholic, followed by severe pain and inflammation in the elbow and wrist joints, and in the feet and ancles. I was absent from the city at this time, and she remained under the care of another practitioner for three weeks, after which I was again called to see her, and found her much relieved from pain, and better in every way than she was when first seized, but still suffering very acutely at night, and no improvement as regarded the swelling of the feet, writs, or elbows, and no restoration of the catamenia, was able to sit on a chair, but not to put her feet to the floor. She was much wasted. I saw her on the first of Au6ust, at which time I procured a specimen of her urine, which presented the following characters:

Color, dark amber.
Sp. Grav., 1.0 16.
Reaction, slightly acid.
Deposits, uric acid, urate of amonia, and a large quantity of earthy phosphates.

I immediately put her on the following:

℞. Acid Nitritric, gtt. xii.
Acid Muriatic, gtt. xviii.

Misce bene in vitreo vaso deinde adde

Syrup Aurantii 1 oz.
Infus. Gentian 11 oz. M.

Cujus capiat cyatho vino deindia quatuor in die.

I saw her again on the 6th, at which time her health had very much improved and she had not the same wasted look; swelling and inflammation of feet gone—able to walk about a little—appetite improving—bowels regular—tongue clean, and evidently gaining flesh and strength.

Obtained a specimen of urine which exhibited the following characteristics:

Color, dark amber.
Sp. Grav., 1.0 19.
Reaction, neutral.
Deposits, Uric acid and urate of amonia. No phosphates.

In the foregoing case it was pretty evident to my mind that the disease arose in a highly chlorotic anœemic girl from the poisoned state of her blood, for no other cause could be assigned for it. It also illustrates pretty clearly that no one mode of treatment is safe or to be relied on in Rheumatism, for had I given her, as is usually the case, colchicum, I verily believe she would have been in her grave. Whereas; the large quantity of phosphates deposited in the first specimen of urine procured, indicated the mode of treatment to be pursued, and it was, indeed, astonishing, how quickly the use of the mineral acids effected the object intended, by increasing the Sp. Grav. of the urine, stopping the discharge of phosphates, giving tone and vigor to the system, and ultimately restoring the suspended functions, for she gradually recovered without the use of any other remedy, and is now in the enjoyment of very good health.

Case 2d.—Mrs. H., Æt. 33. On the first of August last I was called to see this case. She was suffering from a violent attack of hysteria. Her screams could be heard at a great distance. By the usual remedies she soon recovered from this, and I then discovered that since her confinement, which took place on the 25th of May last, (at which time I also attended her,) she has never ceased for a day having a bloody discharge from the uterus, which has very much reduced her. This was very soon stopped by the use of Acetate of Lead and Opium, and she was gradually gaining strength with the use of tonics, when suddenly, on the 11th, I was summoned, and found her suffering from a severe attack of acute rheumatism in the head, neck, wrists and elbows, with inflammation and swelling of the joints, fever, dry coated tongue, bowels constipated, &c., &c. The uterine discharge had been completely stopped for some days, and here was an attack which could be accounted for in no other way than that the drain from the system, which by her own carelessness she allowed to become chronic, was suddenly stopped, revulsion had taken place, and the now pent up discharge had given such a sudden shock to a weakened frame (she had a heavy child nursing, too,) that it had no power immediately to adapt itself to it, and to dispose of the extra material thrown upon it. Hence the blood poisoning and rheuma-

tism. I made no examination chemically of her urine, having merely looked at it and found it to contain a pretty thick deposit. Suspecting it, therefore, to be similar to the other case, and her bowels being also obstinately costive, I put her on the following:

℞. Chloride Hydrarg. gtt. xii.
Ext. Colocynth, Co., gr. xviii. M.

Fiat massa et divide in pilul. vi. quarum capiat una omne nocte et mane postea pulv. Seidlitz.

℞ Acid. Nitric gtt. xii,
" Muriatic gtt. xviii,
Syr. Aurantii 1 oz.
Infus. Gentian 11 oz. M.

Capiat cyatho vino dimidia quatuor in die.

Under the above treatment she gradually began to improve. The urine at first becoming loaded with Lithates. Eventually the secretion became natural, and health and strength returned so fast that she was discharged cured on the 20th.

Case 3d.—Æt. 24, married. Called 11th September. About the beginning of February last, began to complain of pain in the wrists, head and chest, accompanied with swelling and inflammation, especially in the wrists, for which she has been treated in various ways, but with no permanent benefit, by a number of practitioners, regular and irregular, and is now much worse than she has been at all. The wrists are very much swolen and exceedingly painful, and cannot bear the slightest touch or pressure. There is also severe pain in the head and sometimes in the chest. There is no fever during the day, but a severe paroxysm comes on at night, about six o'clock, and lasts till day-light next morning, during the whole of which time she is in a high state of fever, suffers excruiating pain in the parts affected, uttering loud screams and getting quite delirious and remaining so for the greater part of the night. About day-light the fever goes off and she falls into a troubled sleep, after which she is free from fever till evening again. Countenance of a pale *anaemic* pasty appearance;tongue clean,but of a fiery red; bowels costive; pulse 88 while fever is off; urine plentiful, but high colored, and deposits a red brick-like sediment. Hearts action, natural; Catamenia, irregular and scanty.

℞ Pil. Hydrarg.
Pulv. Dover,
Sulph. Quinine aa gr. xviii. M.

Ft. massa et divide in pilul. xii. Cujus capiat una quaque quarta hora.

12th.—Much the same. Passed a very restless night, with fever and delirium. Bowels moved once. Continuatur Pilulas.

13th.—No difference. Passed another restless night. Has taken 9 of the pills. No alteration in the appearance of the urine. Omit pilul.

℞ Acid Benzoic 3i,
Sp. Æth. Nitros 1 1-2 oz.
Syrup Aurantii, 1 oz
Infus. Gentian, 20 oz. M.

Cujus capiat cyatho vino quaque quatre hora.

14th.—Very much better; little or no pain in the joints or head; no fever or delirium last night. Slept all night very quietly for the first time for many months. Procured a specimen of urine, of which she passed five pints in 24 hours, and which presented the following analysis:

Color, amber.
Sp. Grav., 1.0 24.
Reaction, acid.
Deposits, Urate of ammonia in large quantity,
And uric acid.

15th.—Feels much better but very weak, no pain in joints or head, slept well again last night and had no fever or delirium, appetite pretty good, bowels loose, 5 pints urine in 25 hours, large flocculent deposit. Perstat:

17th.—Feels much relieved sleeps well and is able to be up, urine plentiful but high colored and depositing largely. Tongue clean, appetite good.

18th.—Procured a specimen of urine:

Color amber,
Sp. Gr., 1,030.
Reaction, acid.
Deposits, uric acid, urate of ammonia and Hippuric acid,

This case is a very remarkable one from the sudden charm as it were which seemed to have been wrought by the use of the benzoic acid.—She is now well and has been for some time but still uses the benzoic acid three times daily. The swelling in

one of her wrists still continues slightly but is gradualy wearing away.

It would seem then that Rheumatism is not only a blood poison but that the remedies to which it is amenable are nearly as various as the causes which produce it, and that the only way in which we can hope to succeed in combating the disease is to discover those causes whatever they be before we attempt or can be able properly to administer the remedies appropriate in each individual case and I believe that one of the best means of diagnosis consists in chemical and microscopical urinary examinations.

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*ARTICLE IV.—On the structure and functions of Insects.** By HENRY GOADBY, M. D.

INTRODUCTION.

The word Entomology is formed of two Greek roots *entomon*—a cut, cut into, an insect—and *logos*, a discourse; signifying the same as the Latin insect, insectum, intersectum, all the words alluding to one aud the same peculiarity of their external structure, viz: the *cuts*, or *intersections* which manifestly divide the creatures body into three distinct portions—head, thorax, or chest, and the abdomen or body.

The study of this remarkable class of animals, and their surprising economy has hitherto been greatly decried, the minuteness of the objects themselves offering a subject for ridicule. Fairly considered however, it will be seen that no class of animals presents higher, if such exalted claim to our consideration as insects.

Their prodigious numbers—not of *individuals* merely, but of *species* is *most appalling*, and would of itself entitle them to the deep consideration of the reflecting mind; for by a moderate computation there cannot be less than 500,000 distinct species of insect in the world !

*Entered according to Act of Congress, in the year 1856, by Henry Goadby M. D F. L. S. in the Clerk's Office of the District Court, of the United States, of the District of Michigan.

The last catalogue of plants known to exist on the habitable globe, and in the waters thereof amounts to 82,000.

All the known animals of the world, terrestrial and aquatic only amount to about 30,000.

Then too, the powers for good or evil delegated to this class greatly transcends any such, in the animal kingdom. Were it to please the Almighty ruler of the Universe, to let loose *unchecked* his armies of insects, every organism in creation would be consumed in a brief space of time! Surely, then, such formidable creatures are worthy of *some* investigation, or, as the phylosophic sage expressed it "if it has pleased God to construct insects it surely, is not beneath the dignity of man to examine them."

Amongst the plagues with which it pleased Him to visit the ancient Egyptians was *the plague of flies.* It is not very easy for us in our ignorance of the precise species of insect employed as the avenger of the Creator, to measure with precision the agony inflicted upon these contumacious people; but one it *must have been* of a short catalogue of insects. Was it the beautiful sharply cutting golden eye, the *Chrysops cœcutiens?* Or was it the more tormenting stomoxys, [sharp mouth] a creature abundant every where in the autumnal months, and so very like in size and color the common house fly as to be generally mistaken for it. But perhaps it was the terrific Zimb, so eloquently described by Bruce, the Abyssinian traveller.

He says "the appearance, nay the very sound of this fly, occasions more trepidation, movements, and disorder both in the human and brute creation, than whole herds of the most ferocious wild beasts in tenfold greater number than they ever are would produce. As soon as this plague appears, and their buzzing is heard, all the cattle forsake their food, and run wildly about the plain till they die worn out with fatigue, fright, and hunger.

No remedy remains for the residents on such spots but to leave the black earth and hasten down to the sands of Atbara, and there they remain while the rains last. Camels, and even elephants and rhinoceroses, though the two last coat themselves with an armour of mud, are attacked by this winged assassin,

and afflicted with numerous tumours. All the inhabitants of the sea-coast of Melinda down to Cape Gardefui, to Saba and the south of the Red Sea, are obliged in the beginning of the rainy season to remove to the next sand to prevent all their stock of cattle from being destroyed. This is no partial emigration—the inhabitants of all the countries from the mountains of Abyssinia northward, to the confluence of the Nile and Astaboras, are once a year obliged to change their abode and seek protection in the sands of Beja; nor is there any alternative or means of avoiding this though a hostile band were in the way capable of spoiling them of half their substance."

It may have been either of these, each species of which could fully vindicate his mission; but the great probability is that it was *neither ot them* but simply swarms of *mosquitos*. Tiny, apparently fragile and powerless as they are, who has not writhed in torment under the infliction of the cruel bite of this sanguinary insect? The merry, and defiant hum of this irritating little pest at the near approach of the expected banquet, has made many a stout heart quail; men who have met the ferocious Feline animals, encountered and vanquished the formidable Grizzly bear, or have faced the canons mouth without a fear, yet tremble at the dread sound of this tiny—insignificant creature!

If our surmise be correct that this insect was selected as the avenger of an offended God, it would appear that he desired to shew his power by delegating to the least considerable of his creatures (in size) the mighty punishment he intended to inflict on proud, rebellious man. In His hands, and at His fiat, the least became the mightiest!

The plague of flies was intended as a personal torment to the Egyptians, and well was that end fulfilled!

But it pleased God to visit them with a much greated scourge, in the swarms of locusts with which he covered the land. Of all the insects known to man, none are so destructive as this; a few hours will suffice for them to devastate a whole country; to consume every green thing, and leave nothing but blackness to be seen. The Arabians, who are well acquainted with its capabilities, make a locust say to Mahomet, "we are

the army of the Great God; we produce ninety-nine eggs; if the hundred were completed, we should consume the whole earth and all that is in it."

The best, most beautiful, and sublime history of the Egyptian plague of locusts, is that furnished by the prophet Joel, ii, 2,10, 20. His description is so singularlarly true to nature, that no one has yet been able to add anything to it—at most, we can only confirm its accuracy. "A day of darkness and of gloominess, a day of clouds and of thick darkness, as the morning spread upon the mountains; a great people and a strong there hath not been ever the like, neither shall be any more after it, even to the years of many generations. A fire devoureth before them, and behind them a flame burneth; the land is as the garden of Eden before them, and behind them a desolate wilderness; yea, and nothing shall escape them. Like the noise of charriots on the tops of mountains shall they leap, like the noise of fire that devoureth stubble, as a strong people set in battle array. Before their faces the people shall be much pained,all faces shall gather blackness. They shall run like mighty men; they shall climb the wall like men of war; and they shall march every one on his ways, and they shall not break their ranks; neither shall one thrust another, they shall walk every one in his path and when they fall upon the sword they shall not be wounded. They shall run to and fro in the city; they shall run over the wall, they shall climb up upon the houses; they shall enter in at the windows like a thief. The earth shall quake before them, the heavens shall tremble; the sun and the moon shall be dark, and the stars shall withdraw their shining!" That nothing shall be wanting to complete this graphic picture, the prophet then describes the way in which they are usually destroyed. "I will remove far off from you the northern army, and will drive him into a land barren and desolate, with his face towards the east sea, and his hinder part towards the utmost sea, and his stink shall come up, and his ill savour shall come up, because he hath done great things!"

It has been doubted by some authors (Hasselquist,) whether

the locust be capable of extended flight, the weight of evidence, however, appears to be in the affirmative.

Africa always appears to have been subject to the depredations of locusts, and such is true at the present day; moreover the African species is so much larger than locusts usually are. We had a specimen (now in the museum of the Royal College of Surgeons) whose body was four inches long, and when the wings were extended it measured from tip to tip, *nine inches*. It is by no means diffcult to understand, flying in compact bodies as they invariably do, and in *immense* swarms, that "the sun and the moon shall be dark," for the species we have described was larger than many birds.

Major Moore relates that when at Poonah he was witness to an immense army of locusts which ravaged the Mahratta country, and was supposed to come from Arabia. The column they composed, extended *five hundred miles;* and so compact was it, when on the wing, that, like an eclipse, is completely hid the sun, so that no shadow was cast by any object, and some lofty tombs distant from his residence not more than two hundred yards were rendered quite invisible.

Our own wants render it imperative that we should know something of insects; the palpable blunders commonly made by ignorant persons, who mistake enemies for friends, and friends for enemies, would fill a volume. We give the following:

In Germany the gardeners, and country people, gather whole baskets full of the caterpillar of the destructive cabbage moth [Mamestra Brassica,] and then *bury them*, which is just as if we would kill a crab, by covering it with salt water; for many of them being full grown, and ready to pass into their next state, which they do *underground*, instead of destroying them by this practice, their appearing again the following year, in greatly increased numbers is facilitated.

But even the philosopher if ignorant of entomology may err; thus Dr. Darwin, says that, "destroying the beautiful but injurious woodpecker, is the only alternative for preventing the injury they do to our forest trees by boring into them;" not being aware that they bore only those trees which insects have previously attacked, and that those birds diminish very considerably

the number of such insects as are prejudicial to our forests.

Again, how little qualified would that physiologist be to reason conclusively upon the mysterious subject of generation, who would be ignorant of the fact,discovered by an entomologist [Reaumur] that one sexual intercourse is sufficient to fertilize the eggs of ten or eleven generations of Aphides!

A knowledge of entomology tends to dissipate what are known as popular, or vulgar errors. The appearance of the deaths-head hawk-morth [Acherontia Atropos] has in some countries produced the most violent alarm and trepedation amongst the people, who, because it emits a plaintive sound, and is marked with what looks like a deaths-head upon its back, regarded it as the messenger of pestilence and death. But even the excrements of insects have produced the utmost terror and alarm. It is well known that many species of Lepidoptera, when they emerge from the pupa state, discharge a redish fluid, which, in some instances where their numbers have been considerable, has produced the appearance of a shower of blood.

That insects are solely responsible for the production of these bloody showers is no modern discovery; for Sleidan informs us that iu the year 1553 a vast multitude of butterflies swarmed through a great part of Germany, and sprinkled plants, leaves, buildings, and men, with bloody drops, as if it had rained blood.

Reaumur ralates a very striking occurrence of this description; in the beginning of July, 1608, the suburbs of Aix, and a considerable extent of country around it, were covered with what appeared to be a shower of blood. The alarm of the citizens was great, but all agreed iu attributing this appearance to the powers of darkness, and in regarding it as indicative of some dire misfortune about to befal them. Fear and dismay would have taken the deepest root on this occasion, had not M. Peirese, a philosopher of that place, paid attention to insects. A chrysalis which he preserved in his cabinet let him into the secret of this mysterious shower. He discovered that his insect had attained its perfect condition, and left a red spot behind it. On comparing this with the spots of the bloody shower, he found they were identical. Thus did this judicious observer dispel

the ignorant fears and terror which a natural phenomena had caused.

But if this class be potent for evil, and endowed with capabilities of working great destruction to the human family, in their property and persons, others of them are capable of conferring signal benefits; and thereby make ample amends for the depredations committed by their congeners. Considered as food, we find that the larvæ of many species of insects are eaten to this day in several parts of the world. Thus the grub of the palm-weevil [Cordylia palmatum,] has long been esteemed in both Indies.

Madam Merian has figured one of these larvæ, and says that the natives of Surinam roast and eat them as something very delicious. The larvœ of the larger Capricorn tribe of beetles [Cerambyx,] are accounted great delicacies in many countries; and Pliny tells us that the Roman epicures greatly delighted in the Cossus, which they fattened with flour.

The grub of Prionus damicornis, [as thick as a man's finger,] is also eaten at Surinam, and in the West Indies, by blacks and whites, and accounted a great delicacy. We could greatly extend this catalogue, but will only cite one other instance of humanity being wholly sustained by insect food—John the Baptist was fed on locusts and wild honey. To this day the locust is eaten fresh and salted in the east.

In the arts, insects take high rank for the services rendered to man; one insect provides the *gall nuts* from which ink is made, and a black dye procured; another, the cochineal, supplies the beautiful dye known by its name; another insect, the coccus, yields us *shell lac*; a caterpillar makes silk for our use, and human life is constantly being saved, when all other remedies fail, by the application of powdered beetles [Cantharis, and Mylabris,] which possesses the property of blistering the human skin.

Not the least charm of insects is to be met with in their unrivalled *external beauty*, presenting every form of sculpture—every shade of high metalic brilliancy! In this respect they can compare only with the birds; endowed, as the majority of them are, with organs of flight, these offer another point

of comparison with the same class; a still closer analogy is met with, however, in relation to the development of their *respiratory organs.* In both classes, this function appears to attain its maximum development; through the operation of this function both are remarkable for their great activity and energy; and both equally conspicuous for the possession of excessive irritability.

It is worthy of remark that *weavers.* wherever found are *naturalists,* and very generally *entomologists.* Their occupation being strictly *mechanical,* finding employment for the *hands* and leaving the brain free, their mind wanders to the gentle streams and pure fields in which their leisure hours are spent.

The best [English] authority on the beetles is a Spitalfields weaver; and another weaver is the best authority on the lepidoptera. The ribbon weavers of Coventry, the weavers of Norwich, and of Lisle, in France, are all *naturalists.*

So much, then, for the pleasures and advantages which may result from the cultivation of Entomology as a branch of useful science.

Our design in the forthcoming papers we intend to publish,is to describe and illustrate the *structure of insects,* with special regard to the function to be performed by the several organic processes, believing that such information will be acceptable and interesting to the general reader and valuable to the student in physiology, who, as Cuvier remarked, "without a knowledge of the anatomy of insects, is incompetent to understand the laws on which the science of Physiology is based." "If," said the illustrious Anatomist, to his friend Audouin, "I had not studied insects when at college from taste, I should, at a later period, from *reason* and *necessity.*" On another occasion, when a student of Audouin desired to show Cuvier a new fact he thought he had discovered in human structure, he said, "are you an Entomologist?" "No," was the reply. "Go, then," said he, "and dissect an insect, and if, after having done so, you entertain the same views, I will listen to you." The young man did as he was enjoined, but said no more about his discoveries.

ARTICLE V.—A practical Treatise on the Art of Making and Preserving Microscopical and other Preparations. By HENRY GOADBY, M. D., F. L. S., &c.

It has sometimes happened in boxes and upright vessels, that in time the ends have been pressed in by the pressure of the atmosphere: to prevent this contingency I soldered on to the sides at the top and bottom, a bar of glass represented by the dotted lines *e, f*, fig 10—they are not shewn at the bottom. These bars should be affixed to the sides before the vessel be made; they will thus, if exact in their length, serve as a guide to the true position of the ends, and being ground with the top and bottom of the vessel when in the form of a hollow box, will give increased surface for the joints to be made at these places respectively. The bars at the top are very useful as a means of fixing the threads by which the preparation is to be suspended; for this especial purpose I make four loops of the silk to be used (China three twist) and place two on each side of the vessel in the exact place they should occupy, and cement them firmly to the vessel by means of the bars—in mounting the preparation, I have merely to tie the threads which pass through it to these loops. In large vessels constructed on the principle lastly described, it is desirable to seal down the top glass with marine glue instead of the black cement. In this case the top glass should be of the exact size of the outside measure of the box and two small holes should be drilled at opposite corners—one to let the air out while the vessel is being filled, by means of the other. The process is similar, in all respects, to the description given in relation to preparation jars.

To drill the holes, I use what is called in mechanics a "bob-drill," of which a figure is given. (Fig. 13.*) The actual drill consists of a diamond, for a very small hole, a garnet, a crystal of corundum, or a fragment of the corundum, which may be obtained of emery merchants under the name of "emery stone."

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*The "bob" drill: *a*, the steel stock, 10½ inches long perforated at *e* with a round eye for the transmission of the cord.—*b*, the circular weight either of iron or lead.—*c*, a turned handle 9½ long, perforated with a hole in the center ⅛th diameter, through which the drill stock can freely move. and at each end a hole for the catgut, *d*, to pass through and be tied in a knot. The drill is inserted at the bottom of the stock below *a*. A thong of dried eel-skin is a far stronger and much more durable cord for such a drill than cat-gut.

The operator will mount these drills for himself in a piece of thin tin rolled into a tubular form, with one end adapted to the drill stock.

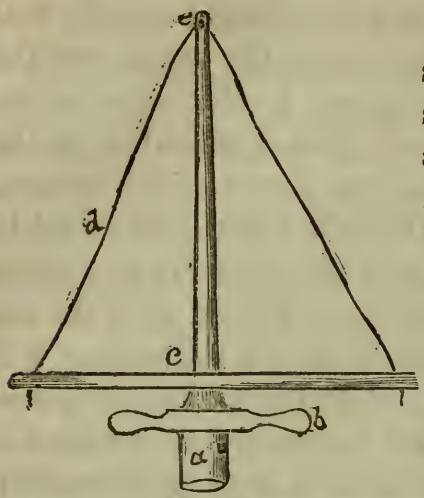

Fig. 13.

The part of the glass to be drilled should be marked either with a scratch diamond or the point of a file. It is only necessary to use sweet oil, and any of the above named substances (I use all of them) will speedily cut a hole through the glass. Superfine emery in addition to oil may be used, but I believe that it cuts the drill without expediting the process.

For large vessels, I have been in the habit of giving increased strength to all the joints by covering them on the outside with a frame of glass consisting of strips about one-fourth of an inch wide; and, as the top glass is included in this arrangement, the corks plugged into the drilled holes are thereby kept in their place and concealed.

Lastly, I have made such preparations ornamental by water gilding the outer frame or moulding. This last process tries the joints severely; for the gilder's cement which must be applied to the moulding, contracts as it dries, and when dry is unyielding. As it is contrary to all theory that a vessel filled with fluid and hermetically sealed, should endure the ever varying alternation of temperature without change—neither affected by the summer heat nor winter's cold—it is desirable to give my experience in relation to this subject. I have in my possession preparations sealed originally without a bubble of air; one of these, the vessel being 9 inches by 11, half an inch deep, was made in Edinburgh in 1841, and framed as a picture —to this time it has not a bubble of air.

Some dissections of Terebratula australis—mounted 13 years ago, are as perfect now as they were when first completed. These and other preparations, have traveled extensively in England, have crossed the Atlantic where they were well tossed about for two weeks out of seven, and they still accompany me

in my wanderings in this country. They endured with impunity the capricious temperature of England,and here they have been subject to 90° down to 8°—still with out change, while other preparations, side by side with the former,about which as much care had been bestowed have miserably failed—why is this?

In some instances one can readily perceive that the cause of failure was due to an ill made vessel, or to the want of flatness in the top glass, which, although yielding to the cement in the first instance, has ultimately resumed its figure and gaped at one corner, whereby the fluid can escape. But, as this explanation does not meet every case of failure,I have been induced to make experiments with the preserving fluids respectively, subjecting them to the action of high and low temperatures, and watching the results, and these experiments agree exactly with the soundness, or the contrary, of all my preparations. I poured some A1 fluid into a glass tube with a bulb, and adopted it to a thermometer scale. I placed this tube and a thermometer into a vessel of water previously regulated to 60°. With ice and salt I gradually lowered the temperature to zero and noted the amount of *contraction* of the fluid. I then gradually increased the temperature to 100 and noted the *expansion* of the fluid. I went through a similar course of proceeding with the A2 and the B fluids respectively, always taking 60° as the mean, and 100° and zero as the maximum and minimum temperatures.

From these experiments I deduced the following: in all the fluids the contraction was not equal to the expansion; neither were the results similar with any two fluids; that the expansion was in direct ratio to the density of the fluid; thus, it is least of all in the A2 and greatest in the B1,148 fluid. The A2 fluid is affected so little by temperature, that the experiments seemed to induce the probability that this fluid might remain permanent in well secured vessels, and I find that all the sound preparations contain this fluid. The B1,100 fluid is not to be trusted in a higher temperature than 80°; and if subject to such, B1.148 will expand so decidedly and considerably, as to break the top glass (which is always the thin-

nest) of the preparation. The experiment with the A2 fluid induced me to think that the expansion and contraction of the glass agreed very *nearly*, or *quite*, it might be, with the fluid; and that the marine glue and black cement fully sympathized. I took, therefore, a sound preparation contained in a large cell, the top cemented with the black cement, and placed it in the water at 60°, and from this point I continued the experiment down to zero, up to 100° as before described, and contined to do this alternately for nearly two hours—to this time it has not undergone any change. I have sometimes been asked, "what provision I made against freezing of the fluid;" no provison is necessary, as it cannot freeze. A fluid of the specific gravity, therefore, of the A2 fluid, may be regarded as the maximum density that can weather the temperature of the atmosphere through all its phases, and the knowledge of this fact makes me fear for the permanency of valuable preparations by my hand, preserved in the denser fluids and now in Europe.

Another fact has resulted, that if a preparation be well and thoroughly preserved in either of the fluids before described, and which may be best adapted to the particular animal, it may be sealed down hermetically without air in a fluid of less specific gravity, and it will be permanent.

The square glass boxes are eminently calculated to give the best effects, as preparations, to a vast number of tne invertebrate animals. If a bottle be used, no matter what its shape, the operator has no alternative, but mnst suspend his specimen from the top, whether it be an animal whose habitat is the bottom of the ocean fixed firmly to a solid rock or otherwise, there it must hang mid-way in the fluid like the coffin of Mahomet, 'twixt earth and sky Surely preparations should be so managed that as far as possible they should tell their own tale, that those persons whose curiosity induces them to scan the contents of a public museum may learn while they look. That a Cephalopod should be seen as if walking on his head; a Tunicated mollusc at if growing from the bottom of the vessel, whilst the beautifully branched Sertularian zoophyte and other animals whose nature it is to cling for support to sub-marine substances should retain, as preparations, all their characterstics ini this respect.

In vessels of the form I have described, all such effects can be readily attained, and I have mounted a number of preparations years ago, with special reference to this subject. The naturalist who stuffs birds or beasts, imparts as much of character to his specimens as possible; and the great end that I have always proposed to myself in connection with my glass vessels, is to do as much for those animals that can only be preserved as *wet* preparations, as has hitherto been commonly done with dried specimens, and I believe I have pretty well succeded.

I have displayed is upright vessels two specimens of Argonauta argo as if walking upon a large piece of branched white coral, the latter being fixed to the bottom of the vessel. Zoophytes, attached to shells or stones, I have displayed as I found them, and so of other animals. * * * *

One of the chief difficulties in the way of examining *wet* preparations, whether in bottles or otherwise, is, that they are literally drowned in light. Now, as every ray of light that is not wanted is in the way, I carefully stop it out. Few preparations have more than *one* really valuable surface—that which in a public museum is placed toward the spectator; by making the opposite surface of the preparation jar black, the light, instead of going through the vessel, is arrested, and all that is superfluous absorbed; the preparation is thrown forward, and there is in effect more light with which to examine it. The band of black should not be too broad, but nicely apportioned to the requirements of the preparation. Among the few preparations that I mounted in bottles and preparation jars for the museum of the Royal College of Surgeons, I ventured to carry out this idea, and the results fully justify all that I have said or can say. Foremost and most conspicuous amongst those with the black back, is a preparation of the cerebro-spinal axis of man, and the spinal cord of the giraffe—the latter preparation dissected by Prof. Owen, and merely mounted by me—both of which are conspicuously visible at the opposide end of the long gallery in which they are placed. I encountered deeply rooted prejudices, due to an aversion to whatever is new; the introduction of a back ground to a preparation bottle was a novelty, therefore an innovation,and consequently,was not adopted. And

yet the preparations referred to stand in the midst of an extensive series ot kindred structures,all of which would be amazingly improved by this simple addition.

In my estimation a back ground is of the greatest importance, and it forms a valuable part of the plan. With the black cement, snfficiently thinned with turpentine to form a paint, I coat that portion of the under surface of every preparation—great and small—that is not immediately beneath the object. Two or three coats of this paint form a beautiful black, which shows through the upper surface of the glass like highly polished marble, for which substance it has frequently been mistaken. Beneath the preparation I place whatever color best contrasts with it, and for this purpose use paper of all colors but black; sometimes white, pale amber, ultra-marine. The under surface of the glass I defend from scratching by pasting paper over its entire surface, and I reserve access to the obverse of the preparation either for the sake of transmitting light for microscopical purposes, or for examining that particular surface, by leaving the paper which is beneath the object free on three sides, and by pasting it down on the *fourth*, it can be turned back and replaced at pleasure.

Preparation making is an art demanding much devotion and time to acquire. At present, museums are managed and controlled by men who believe that there is no better plan of proceeding than to put specimens in a bottle with spirit although the liquid soon becomes discolored, and deposits a thick sediment that renders the whole very turbid the instant the bottle is moved; and this is called "a fine preparation," in which opinion those to whom it is submitted generally acquiesce; and such must continue so long as it be the fashion to expend a great sum of money on the *outside* of a museum, and as little as possible within.

Manipulation Box.—So many little things are required in making preparations, that I determined some years ago to gathér them together and contrive a box capable of holding a fair supply of tools and utensils for ordinary work. I drew plans of the several portions of what I considered to be neces-

sary, similar to the details of fig. 14, and I had it made in *tin* as the lightest and strongest material.

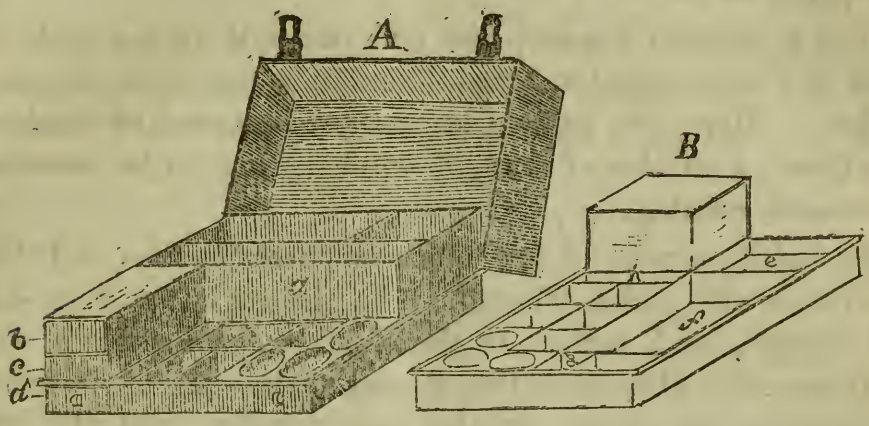

Fig. 14.

We present two figures of our manipulating box, both without the fittings the better to shew the arrangements of the box: they are accurately drawn by measure one tenth the real size. A, fig. 14 shews the thing *complete*; a, represents a tray with *three* compartments—those at the back being much the larger. The left hand compartment (at the back) contains the iron plate, stand, and legs (fig. 3;) a thin mahogany square, mahogany guage, and cutting board for thin glass, small brass square, two card boxes containing thin glass, cut of different sizes. The right hand space is principally occupied with slices of dried injections (to be mounted) and woods of various kinds for sections.

The long space in front is devoted to camel hair brushes to apply the black cement; hack knife, lozenge shaped engravers tool, scratch, and cutting diamonds and a variety of implements all necessary for varied manipulation.

The raised block on the left hand, has a plate of plate glass which drops on to a ledge of tin prepared for its reception, so that it be *flush* with the surface.

This glass constitutes the palette on which the black cement is mixed.

Beneath the glass at *b*, is a drawer the length of the block, and three-fourths one-sixteenth deep; it contains the smaller sized glass for preparations. The lid of this drawer is formed by

the glass already described. Underneath the drawer is a well marked *c*, one inch and three-eighths deep, occupied with gummed paper for labels.

At *d*, is another drawer, two and one-half inches wide, by seven and seven-eighths long—it extends the whole length of the box. Here the palette knives are bestowed of which we have three; a number of saws, of watch spring to be mounted as occasion requires.

The bottles consist of five square stoppered bottles, and three round ones with corks. The square bottles are one and one-half inch square, by 3 inches to the shoulder, and contain each about two oz. One holds the *B*, and another the *A*, 2, fluids; one contains turpentine, another Liq. potassæ, and the fifth liquid (naphtha solution) marine glue.

For the convenience of using as much turpentine as we require,and no more, we filed a deep square notch in the stopper of this bottle, and let in a piece of plate glass one-eighth thick, and one-fourth wide, which is cemented with marine glue. By this means we can easily obtain one drop or more of turpentine.

The round bottles are of the same heighth and diameter,with very wide mouths; one contains lamp black and gold size, in the form of a stiff paste; another receives the egyptian asphaltum dissolved in turpentine and equally stiff. The last bottle has had the rim around the neck filed off, the neck fitted with a brass cap, one and a half inches high. This bottle contains Canada balsam (balsam of fir) and a glass rod to obtain it with. Whenever we travel, however, we remove the glass rod, and close the bottle with a tightly fitted cork, which is covered with the brass cap.

We now remove the tray (*a*) and display the remainder of the box, which consists of *four* spaces.

Letter *e* represents a shallow space over the roof of the long drawer *d*,—it contains spare cells, of all sizes and depths. A large compartment, *f*, receives the larger size glass we employ for preparations. It is six inches long, three seven-eighths wide and one and seven-eighths deep. A small square space *g*, receives the spirit lamp, which is made of brass, one and three-eighths square, two and one-half high, including the cap.

As the spirit lamp is higher than the other fittings belonging to these lower compartments, a round hole has been punched in the floor of that part of the tray which fits on to it, and a chimney (or cap) soldered into in. By this arrangement the tray fits *perfectly*, at the same time it keeps everything in its place. The space at the right of the spirit lamp, holds pill boxes containing mounted diamond, garnet, corundrum, and other drills for glass, and a box containing whiting. At *n*, is a narrow space which holds the apparatus for making marine glue cells (fig. 9.) together with marine glue.

We have been particular in giving the details of this box, so that any person using glasses of different sizes to those we employ and desirous of possesing such a very useful appendage, may have no difficulty in modifying our pattern to suit their want.

SPIRIT OF THE MEDICAL PRESS.

Discussion before the New York Academy of Medicine on the Subject of Ununited Fractures.

Dr. Detmold stated the causes of non-union to be both local and constitutional; but sometimes no cause could be assigned. The old method of causing union was to excite inflammation between the fractured extremeties by friction, blisters, the seton, &c. Resection and wiring the ends together, was another mode. Dr. D. stated that Dr. Mott's cases (where the setton had been employed) were only successful where it had been necessary to *drill*, in order to introduce the seton; and he thinks that Dr. Mott was misled in this way. Dieffenbach resorted to drilling and fastening with ivory pegs. Five years ago Dr. D. had tried boring with a common gimlet, and was successful in all cases. A committee from the Academy had seen one of these operations. This method was afterwards claimed by a western surgeon (Dr. Brainard.)

Dr. Buck referred to the local conditions preventing union, such as portions of muscle or tendon getting between the ends of the bone. Dr. B.

gave the history of a case in which union of the humerus was prevented in this manner. In the tibia and fibula it is sometimes almost impossible to keep the upper fragment of the tibia in place, and the union of the fibula often kept up this difficulty. Dr. B. spoke of Malgaigne's apparatus for overcoming this displacement. He had both failed and succeeded with both seton and exsection. The perforating method was generally successful in about twelve weeks. Friction was useful where the cases were not of too long standing.

Dr. Detmold stated that he had been successful with the perforating method, where Dr. Buck had failed with the seton. He had also been very successful in a fractured ulna after the third trial. One great advantage of the perforating method was that it leaves no unpleasant symptoms. He had often operated at his office, and allowed the patient to go home. Another advantage was that it could be repeated any number of times; another, that it does not shorten the limb. He repeats the operation in one week, if no union has taken place.

Dr. Buck stated that he introduced the seton, in a case, by means of perforating, and union followed; but afterwards it was again broken, and the patient came under the treatment of Dr. Detmold.

Dr. Parker considered this question important for all practitioners, as it often occurred when no cause could be assigned for it, when there was no fault on the part of the surgeon, and was often the basis of mal-practice suits. In non-union of the lower extremeties of hospital patients he used the starch bandage, recommended all possible use of the limb, together with good diet, fresh air, and stimulating drinks. *Excision* (as introduced by White, of Edinburg, in 1760, and improved by J. K. Rodgers, of this city, by wiring the ends together) was often successfully employed. *Electricity* is useful; he knew of one case treated successfully by this agent. Dr. P. had noticed that operations on the upper extremeties were followed with less success than on the lower, and asked for an explanation of this. He had been unsuccessful with the drill; and asked if any benefit was derived from leaving the chips or borings in the hole. He thought there might be.

Dr. Detmold agreed with Dr. Parker that these bony particles, or debris served as a nucleus for the new union.

Dr. Stone thought that in these cases of fracture it was especially important to ascertain whether the case was one of *delayed union* or one of *true false-joint*, where the bones were covered with cartilage, and where a new synovial capsule existed. In the upper extremity, particularly in the humerous, false joints were not uncommonly found, and the fractured extremities, if oblique, could not be readily approximated. In such cases he did not believe the operation by the gimlet, as proposed by Dr. Detmold, would be likely to succeed, or that any operation promised success unless it had for its objects the removal of the cartilage and destruction of the capsule, and

the approximation of the broken extremities to each other. In the lower extremity, especially in the fractures of the tibia, it was extremely rare to meet with cases of false joint. He (Dr. Stone) had never met with a single instance, and was disposed to regard them rather as cases of *delayed union*, which would readily unite if a very little inflammation could be excited. Dr. Stone would expect to obtain this result by the repeated application of blisters; others, by rubbing of the bones together; but Dr. Detmold, by boring with a gimlet. This suggestion of Dr. Detmold was a useful one; but in the fact of union taking place in a week, it proved that very little inflamation was necessary. Dr. Stone has been on the committee who investigated Dr. Detmold's cases, and had then come to this conclusion. As to the idea that the dust or the debris contributed to the union, he must confess that it seemed to him to be truly fanciful; he should suppose that the dust must necessarily be removed in abstracting the gimlet; or on the supposition that it it might possibly be left behind he should regard this as an untoward accident, which would be likely to act as a foreign body and produce abscesses.

Dr. R. S. Kissam remarked that he was successful in one case of non union of the humerus, by means of the starched bandage.

Dr. Batchelder remarked that fractures are solutions of continuity in the bones, which heal in the same way as do like solutions of continuity (wounds) in the soft parts, i. e., by the first or second intention. When the fractured extremites in simple fractures are brought and kept in apposition, the lacerated vessels, pertinent to the bone in the immediate vicinity of the fracture, inosculate, and union by the first intention ensues, as in wounds in the soft parts; with this exception, that the earthy matter which immediately surrounds these vessels at the place of fracture must be first absorbed. This preliminary step is accomplished in a longer or shorter time, according to the age of the patient, or size of the bone. When the crepitus ceases to be perceived, it is an indication that the absorption of the earthly matter is nearly or quite completed; and as motion at the place of fracture diminishes, we infer that re-union is progressing about in proportion to the diminution of abnormal motion; so when this motion has ceased, the inference is that union has taken place, and that the process of re-deposition of ossific matter among and around the vessels, has begun, or will soon begin, and continue till callus is completely formed, provided the fractured parts are kept in position and motionless. If much motion be allowed, the newly formed vascular union will be broken up, and the re-nion will be prevented, and the process have to be gone over with again When the parts are much disturbed, and the union repeatedly broken up, the vessels, thus foiled in their attempts to repair the injury, refuse to renew their efforts; but uniting with the periosteum, form a ligamentous union, which, while it serves as a connecting medium between the ends of the bone, keeps them asunder and prevents bony union. To get rid of this interposed ligamentous substance,

and cause absorption of the earthy matter surrounding the vessels in the immediate vicinity of the fracture, is the first object which surgery should aim at as essential to the cure. In the larger bones this ligamentous union is very spicuous, and is most perfect in cases of ununited fracture of the neck of the femur. In these cases, the capsular ligament is folded in between the fractured surfaces, and acts in the first instance as an extraneous body which tends to prevent osseous union, but which in the end contributes mainly to that which is ligamentous. The objects to be aimed at in all our endeavors to cure ununited fracture are, 1, to get rid of this interposed ligamentous substance; 2, to promote or effect the absorption of the earthy matter which surrounds the vessels at the broken ends of the bone; 3, when this is accomplished, to bring and keep these ends in apposition, that the vessels thus prepared may inosculate and unite as they should do, and probably would have done in the first instance if they had had fair play, or if there had been no fault in the patient's constitution. The method which Dr. B. has adopted and practiced, (with few exceptions in favor of the starch dressing) is to wind a bandage firmly around the affected limb, in order to prevent swelling below the part to which the appropriate application is made. This done, a piece of thick sole-leather soaked in water until perfectly soft and pliable, cut and fitted exactly to the limb, and long enough to reach from joint to joint, and sufficiently large to cover the whole, is to be applied and bound firmly on with a bandage. While this dressing is being consolidated, great care must be taken to put and keep the fractured extremities in perfect apposition, or as nearly so as possible, which is best accomplished, when the lower extremity is the affected member, by relays of assistants, who will hold the parts *in situ*. When this dressing has become dry and consolidated, measures should be taken to make the lower fragment press firmly aginst the upper. As nothing in the system can resist pressure, and newly-formed parts yield readily to its influence, the interposed ligamentous substance of which we have spoken, and also the earthy matter immediately surrounding the vessels at the fractured ends, are soon absorbed, and the vessels which have been thus freed of osseous matter will unite, and the union be re-established. In case of a lower extremity, it may be proper to let the patient get up and move about with the help of crutches, and perhaps bear more or less weight upon the foot, taking care to do it in such a way as to cause as little motion between the fractured ends as possible; especially after a short time, as motion, if kept up, would infallibly prevent union. If it be the humerus, the patient should be confined to his bed, and an apparatus, besides the rubber splint, be so contrived and applied as to draw the lower fragment up, and force the fractured surfaces to press firmly one against the other, which cannot be so well done in the erect or sitting posture as in the recumbent. This bone (the humerus) is the one in which the artificial joint most frequently occurs, and in which the usual methods of cure have most signally failed. In reflecting upon these facts, it has occur-

red to Dr. B. that both these accidents were to be imputed to our mode of treating these fractures; splints are firmly bandaged on, which, with the weight of the limb below the fracture, prevent the muscles drawing the lower fragment up, and causing it to make the requisite pressure against the fractured end of the upper piece—in which opinion he has been fully confirmed when, finding at the end of several weeks there was no union, the impending evil has been immediately obviated by applying an apparatus which caused the fractured ends to press one against the other. He believes that this method of treatment will effect a cure in most cases of ununited humeri, even of long standing.

In compound fractures, union takes place by the second intention, which does not usually commence, or is not appreciated, until the external wound is nearly or quite closed. Dr. B. remarked that the starch bandage, the gutta percha splint, and probably the gypsum bandage, as recommended by Dr. Mathysen (which he had never tried) will, no doubt, be found better than the leather splint, which was resorted to many years before any thing was known of even the starch bandage, or the "dextrine," as recommended by Prof. Van Buren.

Dr. Batchelder exhibited a specimen from Dr. Finnell's collection, of ununited fracture of the radius and ulna, which beautifully illustrated the manner in which the ligamentous union is formed.

Dr. Finnell remarked that the man to whom the ulna and radius referred to by Dr. Batchelder, belonged, had good use of his arm. In St. Vincent's Hospital he had often found it necessary to use stimulants freely. He approved of electricity.

Dr. Phelps observed that all present must conclude that the main point in practice was to secure a certain amount of inflammation in the ends of the bone before union could be produced.

Dr. W. Parker said that the question seemed brought to two points: 1, Where there is union by ligament; and 2, where there is a false joint, So long as the inflammation is mild, there is no union. Again, there is such a thing as too much inflammation. Diarrhœa, lactation, burns, suppuration, &c., may prevent union. A physician of this city, who had a fracture and an injury of the brain, was severely salivated, and no union took place until the salivation ceased, at the end of thirteen weeks. The system must be brought to the ordinary standing point, by correcting it if deranged, and bringing it to a proper tone. But in a false joint, an operation must be performed.

Dr. McNulty presented an instrument for the purpose of introducing a platinum wire between the ends of an ununited bone, by means of which he proposed to pass a galvanic current to act as a cautery, and thus produce inflammation and union. Dr. McN. was requested to give the history of the cases in which he might try it.—*Louisville Review.*

Iodide of Zinc in enlarged Tonsils.

Several years since my attention was called to the use of Iodide of Zinc in enlarged tonsils of a chronic character. A few cases soon presented themselves, in which the tonsil instrument would have been otherwise the resort as the only means of relief. But by the use of the repeated application of a solution of ten grs. of the salt to 31 of water, I have been able, in a large majority of cases, to overcome these chronic enlargements. Such were the fortunate results of the use of the remedy in these cases, that I was induced to try its efficacy in other cases.

I have since used it in ulceration of the Os Uteri. At first I used the solution and increased its strength. The result encouraged me in a perseverance in its use, and was decidedly better than usually follows the use of the nitrate of silver—in my hands at least. Instead of the solution, I now use the powder, by means of the hair pencil or a small piece of fine sponge on a probang and carried through the speculum to the ulcerated spot. A few applications, with some day's interval, were all that have been necessary. The solution to the enlarged neck or lips of the uterus will be found a valuable local alterative.

To the ulcers of "nursing sore mouth," to the fauces of scarlatina, to foul ulcers upon the extremeties, the solution has been very often followed by excellent results.

Time will not allow me now to give a report in detail of any one of the different cases in which I have used the Iodide of Zinc, but because I regard it, after considerable experience, as not only a valuable remedy, but preferable even to nitr. arg. in very many cases, I have thought proper in this brief article to call the attention of the profession to it,and hope that after a trial as I have given it, the result may be as satisfactory.—*Iowa Medical Journal.*

Diagnosis of Injuries of the Shoulder joint.

In our last number we reported a case, which illustrated the difficulties to be encountered in forming a correct diagnosis in injuries of the shoulder joint. In connection with this subject, we present to our readers, the confession of a distinguished French surgeon, M. Lenoir. It was elicited by the discussion which took place on the 13th of October, 1852, at a meeting of the Societe de Chirurgie. We translate his remarks, as published in the *Bulletin de la Societe de Chirurgie,* tom. iii, p. 180.

Remarks of M. Lenoir.—You are aware that we have two kinds of fracture in this region. One, and that the most common, through the surgical neck; the other, but rarely observed, throngh the anatomical neck. Now I admit nearly all that has been said about the facility of detecting a fracture through the surgical neck, and the value of the proceeding adopted by M. Richet, for reducing the dislocated head of the bone. In this accident

the upper fragments are a certain volume, and something tangible, to aid us in our exploration and reduction. But I deny that a fracture through anatomical neck may be so readily detected. I deny that, in such a case, the head of the upper fragment can be grasped with facility, beneath the soft parts which envelop the shoulder, and I assert the impossibility of returning, by lateral pressure, the luxated bone into the glenoid cavity. I base my assertion upon two cases, which I find recorded in the annals of science, and upon one which came under my own obervation. The first of these occurred in the practice of my old master (Houselot *pere*,) and formed the basis of the excellent memoirs published by Delpech, in his *Chirurge Clinique de Montpelier*. The specimen should now be in the Museam of the *Val-de-Grace*, where it was deposited by Houselot. The patient was a hemiplegic old man, who fell out of bed, and died from the effects of the injury at the end of twelve days. The head of the bone was thrown backwards into the infra spinous space. In this case the existence of the fracture could not be detected during life. The second case is reported by Sir Astley Cooper, in his excellent Treatise on Fractures and Dislocations. The fracture was intra capsular, and the head of the bone was thrown in front of the scapula, to which it had contracted, as shown by the autopsy, osseous adhesions. The patient died several years after the accident. At the time, she was treated by Mr. Lucus one of the surgeons of Guy's Hospital, who failed to detect the fracture. The third case occurred in my own practice. A woman æt. 88, by a fall on her shoulder, fractured the anatomical neck of the humerus. She died some five or six months after the accident, and at the autopsy, I found that the head of the bone had been thrown from the glenoid cavity, through a large rent in the capsular ligament, and that it rested, by its uneven surface, on the brachial plexus, its smooth and cartilaginous surface presented anteriorly, so that it had been thrown in a direction from above downwards.

Here, then, we have three cases of fracture of the anatomical neck of the humerus, complicated with a luxation which had been overlooked. Could this have been the result of inattention, or want of skill, on the part of the observers? Or, was it not owing to the fact, that, if not impossible, it is exceedingly difficult a diagnosis in these cases? A single glance at the symptoms by which such accidents may be characterized, will aid us in determining this point. In the first place they are produced only by extreme violence applied almost exclusively, to the stump of the shoulder; such violence always gives rise to a considerable extravasation of blood, tumefaction, and stiffness of the contused muscles; all of which circumstances are unfavorable to a thorough examination of a deeply seated fracture. Again, the deformity by which this accident is attended, is scarcely perceptible. Indeed, when the head of the humerus is separated from the tubercles, the upper fragment still presents a certain volume, and if it remain in the glenoid cavity, the stump of the shoulder will be but little depressed. I ask, then, is it possible for the most attentive surgeon to detect this slight depression, while the soft parts are

still swolen ? Crepitus, a pathognomonic symptom of fracture, is here absent or it may be indistinct, when th uneven surface of the lower fragment is brought in contact with the smooth, polished surface of the glenoid cavity. But the sensation thus produced is calculated rather to lead the surgeon to suppose, that, instead of a fracture,he has only a contusion to treat. Beside the symptoms already enumerated, we have the presence of the head of the bone in the vicinity of the glenoid cavity; if detected, of course it will be the most positive test of the fracture and the luxation; but the tumefaction remaining for days after the accident will interfere with our examination, and, as the head of the bone is but a small size, may it not be so situated as to render it impossible for the most experienced surgeon to discover it? For these reasons, I maintain, that, in these cases, errors in diagnosis must often be committed.—*Western Lancet.*

Extract from a notice of recent Researches on the origin of Entozoa, more especially of tape worms. By Allen Thompson, M. D., F. R. S. S., London and Edinburgh, and Professor of Anatomy in the University of Glascow.

There can be no doubt, whatever, that the occurrence of tapeworm in the human subject, as in animals, is dependent on the introduction into the alimentary canal of the Scolex-larva, acccidentally or along with food. The most frequent, though not the only, source of these Scolices in this country and a part of the continent of Europe, is probably the Cysticercus cellulosæ of measly pork, when this is used in a partially cooked or raw state. This accords with general belief,and with what has been ascertained in a number of instances of persons affected with tape-worm, viz., that they had been in the of habit eating raw or imperfectly-cooked meat. In Abyssinia,where this habit prevails to a great extent,the inhabitants are well known to be remarkably subject to tape-worm; indeed, in that country the affection is looked upon as entirely a natural one.

The difference in the prevalence of Tænia solium in this country and in western Europe, and of the Bothriocephalus latus in the eastern division of the Continent, is well known; but I am not aware whether any observations have yet been made upon the most probable source of the latter entozoon. In Russia, however, where the Bothriocephalus is the usual tape-worm, it has been found that the long-continued use of an exclusive animal diet, such as has been recommended for the cure of some diseases, has been followed by the occurrence of Tænia solium. In Switzerland, also, in the eastern parts of which the Bothriocephalus prevails,it has been observed that the hogs are rarely, if ever affected with Cysticercus; but occasionally pork is introduced from France strongly tainted with this affection, and this may account for

the occasional occurrence of the Tænia solium, especially in western Switzerland.*

These circumstances seem to point out very clearly the means to be adopted for the prevention of this troublesome complaint. At the same time, it is probable that there may be some accidental means by which these larvæ of the tape-worm may be introduced; and it will be easily understood how this may more particularly happen in the cases of butchers, cooks, or others in the habit of handling affected meat.

The instances in which the human body is affected with the Cysticercus, or other cystic entozoa, though not very rare, are by no means so frequent as the tape-worm; but they are much more serious in their effects, more obscure in their origin, and in the meantime, more difficult to prevent. Scarcely any attention has yet been given to the source from which the various cystic entozoa infesting the human body may have derived their origin; but the observations already referred to make it extremely probable, that the explanation of their introduction is to be sought for in the same causes which have been shown to operate in the lower animals. Thus it appears to have been demonstrated that the Cœnurus of the sheep proceeds from the ova or first embryos of Tænia, and it is most probable that these are obtained from the dog. The only mode therefore, of removing this affection from a flock in which it may have become prevalent, and in which it is well known sometimes to cause very great losses, must be the careful separation of the dog from the sheep for a certain time: for such time indeed, as that the dog shall find no more Cœnuri in the offal, &c., of the sheep, in eating which it receives the larvæ of its Tænia, and the dog being free from this Tænia, shall not furnish the ova or embroys, which being taken accidentally with the pasturage or water by the sheep, establish themselves in them as encysted Cœnuri. Von Siebold states the important fact, that those flocks which are entirely without dogs, and are stall-fed, are never effected with the sturdy.

A remarkable example of the presence of cystic entozoa in the human subject is mentioned by Von Siebold, as having recently been described by Dr. Schleisner, in his "Medical Topography of Iceland," published 1851. It appears that the people of that country have been for some time suffering, to a great extent, under a very remarkable hydated disease. The Hydatids affect the liver, peritoneum, and subcutaneous texture. Eschricht writes to Von Siebold, that this disease has extended itself to such an alarming degree, about a sixth of the whole population being affected with it, that it is attracting considerable attention at Copenhagen. It produces long-protracted illness, and terminates in a painful death; and means of cure have not yet been discovered. Von Siebold considers it as extremely probable that this disease, con-

*See the notice of a case, in which it appeared that the abstinance from the practice of eating raw meat during some time, effected a cure of inveterate tape-worm, with which a person had been long affected, in the June number of the *Edin. Monthly Jour. of Med.* for the present year. A gentleman of my acquaintance, who has long been affected with a very large and inveterate tape-worm, informs me, that formerly he was in the habit of eating animal food imperfectly cooked.

sisting in the development of a cystic entozoon, depends on the introduction of the ova of a Tænia into the body; and that this arises from the immense quantity of dogs kept in Iceland for the purpose of herding sheep and cattle. Should the further elucidation of this fact lead to the adoption of successful measures for the preventation of the disease, it will be a satisfactory instance of the assistance which may be furnished to rational pathology and the practice of medicine, from physiological researches, which might at first sight have appeared to some to be very remote from such an application.

Before concluding I would call the attention of medical practitioners, more directly than heretofore, to the investigation of the habits and circumstances of patients who may be under their care for various verminous affections. There is another department of the subject upon which I have been unable to touch, which is also greatly deserving of increased attention; I mean the collection of observasions by those who may be favorably situated, as to the nature of the entozoa which affects different races and nations of mankind, together with the circumstances and modes of life, which may seem to have an influence in determining the nature of the entozoa in different countries. As a single example of what may be expected from well conducted obrervations of this kind, I may here mention that at von Siebold's suggestion, Dr. Bilharz, being in charge of making dissections of the dead bodies in the hospital of Cairo, has already, within the short space of two years discovered five entozoa with which the Egyptian and other native Africans are affected, and some of them very frequently and to a great extent, which are different from those which have long been known as the common entozoa of the European races.—*Glascow Medical Journal, N. Hampsiire Jour. Medicine.*

The Westminister Review, on hereditory influence.

What we said two months since in regard to the value of the English Reviews to the Medical man is strikingly exemplified in the July number of the *Westminister*, now before us. There is one article entitled *Hereditary Influence. Animal and Human*, which every member of our profession *ought* to read. The subject is one which, more than any other, has baffled the researches of scientific men, and for this very reason has elicited continual investigation. The results are as yet superficial and deficient, and the whole ground is covered by theories as unlike in nature as the individuals who form them are in modes of thought. The article to which we have referred does not pretend to clear away the difficulties which we meet in studying this subject, but rather to state distinctly what these difficulties are. The author has noted four general facts which must be the basis of all inquiry into Hereditary influences. These are as follows:—

First. Heritage is constant; it is a law of organized beings that the organization of parents should be transmitted to their offspring.

Second. The offspring directly represents both parents, and indirectly it represents its ancestors.

Third. The offsrpring never represents its parents with absolute equality although it represents them in every organ. Sometimes one parent predominates in one system, sometimes in another, sometimes in all.

Fourth. The causes of this predominance are various. Some being connected with "potency" of race, or individual superiority in age, vigor, &c.; others beiug in the present state of knowledge not recognizable.

That Heritage is a law of nature we see exemplified daily. The races of animals all retain through ages their peculiar characteristics. And yet this law requires a qualification. We do not, it is true, expect a horse to "engender an elephant," the squirrel to be the "progeny of a lioness, the tadpole of the tapir," yet, deformities, and montrosities are frequently seen, children are unlike their parents in character and in features, the broadest diversities may exist in the same familiy,and iu the closest degrees of relationship. These apparent departures from a Natural law are, however, mere blind-alleys from a broad thoroughfare. The species still retains its distinctive features, as the public highway passes onward, undiminished in importance by the courts and places opening from it. Sometimes certain peculiarities of mind or body remain masked for whole generations and then reappear. The physician often meets these cases in families disposed to scrofula, consumption and insanity, and a knowledge of the fact and of the observations made upon this subject frequently aid him in giving valuable advice.

It was not our purpose to speak of this article in the *Westminister* at any length. It is a most curious and entertaining chapter, both to the professional and general reader.—*N. Hampshire Jour. of Medicine.*

American Medical Journals.

It will, we think, be universally conceded, that the main objects of a medical journal are to afford a medium of expression to those whose communications are of real value, and which, consequently, advance medical science and the public weal; next, to be the archives for facts worthy to be treasured up for future reference; to prove the vehicle of question and answer upon the important topics of physiological, pathological, therapeutical and hygienic discoveries;to be are independent arbiter of professional literature;and finally, to endeaver to unite, by a pleasant influence, all "good men and true" in the bonds of profssional friendship. There are many collateral points,to which we need not refer; such will suggest themselves to every one. The chief uses of a periodical devoted to the exposition of the current questions of the day in medicine and surgery, are evidently those we have indicated.

Are these objects universally aimed at by the medical press of our coun-

try? Without censoriousness, we think not. It is remarked by excellent judges, that, if we have *more* newspapers in the United States than in European countries, we have fewer *good* ones. This is eminently true of medical journals. It is really a matter of astonishment to us how so many can be sustained; still more do we marvel at the not infrequent advent of new ones; *cui bona?* may well be asked. The truth is, that a *few* puplications of this sort, faithfully conducted, and supported, as they ought to be, not only by a good subscription list, but by the pens of reliable and zealous scholars and practitioners, will effect more than hundreds *"got up,"* for specious purposes, or by professional *cliques*; and which scramble desperately for a subsistence for a time, fill their pages with anything and everything, as starvelings are apt to do; live largely upon *"Selections,"* and either die of inanition, or continue to "drag their slow length along."

In these days, it would seem that every school—nay, every *vagary* too, must have its "organ" in the shape of a journal. So we find all the *"pathies,"* wrapped in blue or yellow covers, flinging themselves to the winds (especially those of popular favor) with erratic flight, like sickly and strange birds, wonderously ill-favored!

The remedy for this evil of *poly-journalism* is in the hands of the members of our profession; if they desire to have really good and flourishing media of communication and information, they have only to decree it, and it *must* be. Let them support with their influence, and with *their written contributions*, as well as with their purses, the truly scientific, honest and pains-taking journals we have amongst us; and others not worthy of such epithets, will soon be shadows like the shadows they pursue; whether they are set up as special agents, or are "things of shreds and patches," receiving alike the contributions of the varying and opposing quackeries of this gullible age.

The free consideration of this subject, editorially, in our pages, may possibly be deemed open to animadversion; in view, however, of its importance, we waive any points of mere taste, and present what we believe to be *the truth*, to our readers.—*Boston Med. and Surg. Journal.*

The Peninsular Journal and Dr. Storer.

The editors of the *Peninsular Journal*, in reply to our article of the 4th August, state that they are unable to find the name of Mr. Perabeau in the "Catalogue of the Officers and Students of Harvard University for the academical year 1855–1856, first term," and add, "we state the fact, and leave the application to be made by those who take the trouble to read what we have written." The reason why the editors of the *Peninsular Journal* could not find the name is simply that they looked in the Academical Catalogue, which is published in September, and which consequently cannot con-

tain the names of students attending the medical lectures of the *ensuing* winter, It is customary to publish in the general catalogue, for the first term, the names of the students of the preceding year, a separate catalogue of the medical students being printed in November. If the editors of the *Peninsular Journal* will take the trouble of examining the "Catalogue of Students attending the Medical Lectures in Boston, 1855–56," a copy of which we have sent them by mail, they will find the name of Mr. Perabeau, and no doubt will do Dr. Storer the justice to acknowledge it.—*Boston Med. and Surg. Journal.*

Routine Treatment.

It is characteristic of the advancement of medical science, that the treatment of disease is becoming more rational, and less a matter of routine. Formerly the treatment of almost every patient was conducted in conformity to rules which admitted only of limited modifications, according to the particular case. Venesection was employed at the outset; even those whose exhausted energies seemed to call most loudly for a supporting treatment were not exempt from this universal remedy. And although modifications in the type of diseases, and in the human constitution, have induced corresponding modifications of treatment among intelligent practitioners, there are, even now, not a few who still adhere to the lancet as a necessary preliminary, in almost all cases, to the administration of drugs. After blood-letting, followed an emetic, without much regard to the nature of the disease or the state of the patient's constitution. Mercury was formerly given regularly in many diseases for which its use is now abandoned, though we fear that, even now, patients are occasionally salivated in typhoid fever, from an obstinate adherance to long-established custom.

Notwithstanding the great improvements in treatment resulting from a general diffusion of enlarged and rational views, a strong tendency to routine practice still prevails. This is seen even in the abandonment of certain modes of treatment rendered unpopular from the effects which have followed their abuse. There are practitioners who systematically abstain from depletion, who boast that they have not drawn blood for years in a single case. We endeavored to show, in a former number, that there was danger of this valuable remedy falling into neglect; and that dangerous inflammations, particularly of the lungs, may prove fatal, which might in some cases have been arrested or controlled by an early and free bleeding. The treatment of women after delivery, in ordinary cases, is quite a matter of routine. The swathe is tightly applied around the abdomen, a dose of castor oil is given on the second or third day, a diet of slops for a week, animal food often not for a fortnight, the hori-

zontal posture for eight or nine days, &c., &c., which are adhered to with as much regularity as if all women and all labors were patterns of each other. The poor infant is often no less victimized by a prescribed treatment, as if congenital disease no less than original sin were the lot of mankind. Happy is he who gets off with a dose of molasses and water; oftener, castor oil is poured down his innocent throat, and we have actually known a nurse propose to administer a teaspoonful of *urine* to a newborn infant, saying that there was nothing like a little clean chamber-lie for a baby!

Why must all patients with the same disease be treated alike? Why should a woman to whom child-bearing is almost a trifling affair, be subjected to the rigid diet and close confinement appropriate only to those in whom the effects of parturition are more serious? Why should she take a dose of oil on the third day when there are no symptoms which call for it, or have her breasts drawn and fomented and greased and kneaded, in order to prevent engorgements and abscess, means very likely to cause those very evils? Let us learn to be rational in our treatment; suit our remedies rather to the condition of the patient than to the name of the disease; to meet threatening and dangerous symptoms with prompt and energetic treatment, when needful, and to avoid active interference when the powers of nature are conducting the patient to a certain and speedy recovery.—*Boston Med. and Surg. Jour.*

New Form of Astringent Application. By Dr. Wm. Bayes, Brighton. Pure glycerine dissolves nearly its own weight of tannin, affording a very powerful local astringent application.

The solution of tannin in pure glycerine appears to me to supply a desideratum long felt, and capable of a great variety of useful applications.

The solvent property of glycerine over tannin, allows us to form a lotion of any desirable strength, as the solution is readily miscible with water.

The solution of tannin in glycerine, in one or other of its strengths is peculiarly applicable to many disorders of the mucous membrane, readily combining pith mucus, and forming a non-evaporizable coating over dry membranes; hence it may with benefit be applied to the mucous membrane of the eye and ear in many of its diseased conditions. It forms a most convenient application to the vaginal, uterine, urethral, or rectal membranes, where a strong and non-irritant astringant lotion is desired.

In local hæmorrhages, where the bleeding surface can easily be reached, it will prove very convenient, and may be applied either with a sponge or small brush.

The solution must be kept in the dark, and should not be prepared for any great length of time before using, or decomposition will occur.

It is singular that glycerine does not possess the same property towards gallic acid.—*Association Med. Jour.—Charleston Med. Journal, June*, 1856.

NEW PUBLICATIONS.

Medical Jurisprudence. By Alfred S. Taylor, M.D. F.R.S. &c. Fourth American from the fifth and improved London edition. Edited with additions by Edward Hartshorn, M.D., one of the Surgeons to Will's Hospital, Philadelphia. Blanchard & Lea, Publishers.

When it is considered that the demand for Arsenic, Strychnine, and Opium has augmented, in our county, during the few past years, beyond precedent, and when, also, the numerous examples of the application of one or the other of these drugs to suicidal and murderous purposes, are considered, the great utility and importance of Medico legal science will be readily perceived and duly appreciated. Indeed in a temporal point of view, it ranks, in importance, next to *Practical* Medicine and intelligent conservative Surgery. In a moral, holding forth, as it does, to the vicious, of murderous intent, the prospect of detection, with an approximation, to unerring certainty, its teachings occupy a place near the sublime lessons of ethics and theology.

How essential is it then, that its principles and doctrines be thoroughly taught in our public institutions of medicine; that medical men, so familiarize themselves therewith, as to be competent to testify, with accuracy and clearness and that both the lawyer and the judge understand them so minutelyly as to be qualified to interogate professional witnesses, pertinently—not in appropriately, and to determine, correctly, the right and the wrong in medical testimony. If, too, its plainer and more readily understood facts and revelations were thrown broadcast, among the people, through the popular press, would it not be one of the cogent safeguards against the perpetration of crime. True, not every physician, lawyer, and judge can be expected to appropriate the time, necessary to qualify mself

to testify, or to apreciate testimony, with the readiness and accuracy of a master, but it is believed that both the one and the other may, without an unprofitable waste of time, possess themselves of the elements of the science, to such an extent as not only not to be embarrassed, when the duty devolves upon the former, to testify in a case that involves the life of a fellow being and upon the latter to search for truth in such examples; to determine when it is found and its legal significance.

To attempt a particular analysis or an extended review of the labors of Dr. Taylor seems supererogatory. They are herculian and entitle him to a place among the most learned, if not the most philanthropic men of the present, or any former age. The conceeded accuracy of his reasoning and decuctions, his profound learning, his tersness of style and above all, the ardor and candor, by which he is characterized, in the aggregate, have conferred, both upon him and his work, a reputation, that is imperishable. We would not recommend the work before us, to the exclusion of the excellent treatise of Guy, the profound and popular lectures of Thompson; the able work of our distinguished countryman T. R. Beck, nor to the more recent and almost cyclopedic production of Wharton, and Stille, but we may say. and with emphasis, that neither the physician nor the lawyer's library, nor even that of the genleman of literary attainments can be considered complete, without it.

The additions of the American editor, we regard as valuable contributions to medico legal science,and as giving to the work of Dr. Taylor, a completeness, that essentially augments its value.

The volume consists of seventy chapters, and the numerous topics treated of, are so arranged, as, by an easy transation, to lead the mind of the reader from one to the other and to exhibit the whole, as nearly as practicable, in scientific relation.

It comes to us, in the usual excellency and style of finish. characteristic of all that issues from the prolific press of Messrs. Blanchard & Lee,—the type paper and binding being all of the best quality.

It becomes us to tender our unfeigned thanks to the publishers, for the many favors, they have conferred upon us and to hope they may realize. not merely, in lauditory praise, but in substantial aid, an ample equivalent for their enterprise and

exertions,in furnishing to the masses, the sources of substantial intellectual culture. K.

To be found at Raymond & Selleck's, Jefferson Avenue, Detroit, Mich.

EDITORIAL AND MISCELLANY.

The Medical department of the Michigan University.

The prosperity and success of our State University in all its departments present an object of just pride, and of deep interest to every citizen of the State, who duly appreciates mental cultivation, and the advancement of the arts and sciences. Being the first institution in our country, endowed by government, and regulated by State authority its position is anomalous, and to a certain extent must be regarded as an experiment. In view of the obstacles with which it has had to contend, incident to its peculiar relation to State politics, and legislative enactments, no one can deny that it has been thus far in a high degree successful. Its medical department with reference to its position and progress, is of special interest to the medical profession, and offers to us the subject for a few editorial observations.

To present the legislative history of the University in all its detail is unnecessary for our present purpose; suffice it that the state has set apart an ample fund, as a liberal endowment, and placed it at the disposal and under the control of a corporate body known as the "Board of Regents"—elected by the people. Now at a time when so great a diversity of opinion respecting the healing art is prevalent among the people, we may well ask whether the University—representing the legitimate school of medical science—has a foundation, that will insure its integrity and guarantee its permanency.

The idea of making government an institution for the propagation of medical science has been objected to,and the rationale offered in support of the objection, has embodied the same argu-

ment, which repudiates "the union of Church and State." This comparison, however plausible at first sight, will not bear analysis, inasmuch as it is only requisite to show the contrast which subsists between our temporal and spiritual interests.

As to some of the great ends, and objects of government, all are perfectly agreed. "That it is designed to protect our persons and property—to compl us to satisfy our wants by industry—to decide our differences not by the strong hand, but by arbitration; in short *to secure the greatest good to the greatest number.*" To accomplish the latter it becomes one of the highest objects to promote the advancement of the arts and sciences.

If it is competent for the government to institute specific regulations for the health and welfare of the army, is it not equally competent to throw the ægis of governmental support and protection around schools established for the purpose of securing the requisite qualification for appointment to the army medical staff? If it must appoint official boards of health, hospital surgeons, and medical attendants, is it not responsible for the manner in which such duties are performed? It is then clearly a legitimate object of government to promote the advancement of medical science; now let us see if it is,as clearly, *practicable.* This point has always been to us a matter of much doubt, and when hydraheaded quackery in one of its most specious forms had secured an act, for the establishment of an "infinitessimal" chair in our State University, doubt was changed to a strong conviction that a government medical school must of necessity, have a foundation of insecure support; a basis dependent upon the vacillation, and political intrigue of legislative enactments. But the deision of the supreme court, tacitly endorsing *the independent position of the Regents*, together with the legislative history of the University can not fail to convince any unprejudiced mind of the fact that the organic statute—designed by government to be perpetual—has an ample provision for its integrity, and perpetuity, in safeguards and protective barriers that defy the assaults of quackery even though made through the subversive influence of a venal Legislature. On the other hand the Regents themselves though independent of legislative enactments, in their supervision, have

no right to violate the original design of Government, clearly expressed in the organic law, and therefore can not prostitute the funds committed to their charge by "offering up incense to strange Gods" upon an altar consecrated to the God of health. The same power that will effectually protect on the one hand against legislative interference, will demand on the other a faithful execution of the Spirit and intent of the organic statute.

We do not claim for the University, perfection either in its plan of organization, or its protective provisions; for like all similar institutions, it has associated conservative principles, with elements incompatible with harmony and progress. We only claim for it a substantial basis,and at the same time hold, that mutations and improvements are as necessary to its operative development as are the changes of youth to manhood. Respecting the progress of the University, we believe there is greater cause for apprehension from the influence exerted in its behalf by some of its professed friends, than from its avowed enemies. There are those who claim that the University has a *Godfather*, and being yet in its infancy, must be governed, and controlled by the dictates and caprices, of one, whose paternal regard has prompted self sacrifices, and laborious efforts in delivering it from the struggles of its inception, and who, as an enduring memorial of *capacity*, is permitted to fill "the chair of *emeritus*, professor." Now we are willing to concede all this to the past infantile history of the University, but the time has come when certain improvements may, and should be made, even at the risk of incurring the displeasure of its doting "pater noster."

The first and greatest improvement that can be suggested, is *to transfer the medical department, from its present country seat to this city.* There are many cogent reasons for making this change, but that which alone ought to be sufficient is the fact that it would increase its clinical advantages, just in ratio to the difference between a population of four or five thousand, and one of sixty-five or seventy thousand. To argue the feasibility of such a change, and to show the distinguishing advantages afforded by those schools which furnish superior clinical

instruction, over those which offer comparatively none, seems to us a work of supererogation. But inasmuch as we have before us, the concentrated opinions of him who is quoted by some as "spnosor of the University," let us see how he values clinical instruction, as an auxilliary in medical education. In his report on this subject to the American medical Association, found in vol. VI, of the Transactions, he gravely informs us that "a *thorough* knowledge of the principles,and elements of the science of medicine should precede any attempt at their practical application." By *principles* and *elements*, he must mean a knowledge of Anatomy, Physiology, Chemistry and Materia Medica; n ɔw, can a *thorough* knowledge of these fundamental branches, be acquired without *some* knowledge of their practical application ? There is a knowledge of science in the abstract *i. e.*, a knowledge of it, solely as a source of pleasure to the individual; that contemplates its beauties merely because they are such, or prosecutes, and masters its difficulties for the sake of discovery irrespective of utility, or of practical application. There is a knowledge of science also, that imparts no less pleasure, and satisfaction from its pursuit, evolving principles, that lead to important discoveries, and yet makes all subservient to some important practical purpose. It is not the abstract, but the scientific attainment *that contemplates utility*, which the student of medicine needs, and must have in order to make his knowledge *thorough* and available. The idea of utility or of practical application therefore, should proceed "pari passu," with the acquaintance of a knowledge of *principles* and *elements*. It is the "Clinical Instruction" that inspires the medical student with zeal, quickens his perceptions, and enables him to appreciate the responsibility, which he has assumed and the *importance* of a *thorough* knowledge of the *elementary* principles of medical science. The author of the report embodied the above sentiment which we have quoted in a special plea, against what he seems to regard as a magnified importance given to clinical teaching, and hospital advantages.

But we presume that no one, who, having a knowledge of the facts, has ever read this part of the report, without declaring the whole a piece of *transparant sophistry*—a fortifiation thrown up

to protect the University from the influence of the odious fact, that in its present location, it has not nor can it have those clinical advantages, which at this age of the world, are justly regarded as indispensable to the vitality and success of a medical school.

This city offers abundant opportunity, and facilities for "clinical instruction" both by illustrations before the class, and by hospital treatment, equal if not superior, to any other of the same population—advantages that are now, unimproved and neglected. There is no good reason why they should not be made available to the best interests of the University, on the contrary there are many other considerations which might be offered to prove, that the times *demand it*, the force of circumstances, must accomplish it, or the medical department will deteriorate and the hope of its ultimate success, must be abandoned. R.

Pratt's Self Adjusting Truss.

DETROIT, August 21, 1856.

I have for the last three years or more, been familiar with "*Pratt's self adjusting truss*;" have applied it several times myself and witnessed its application by others, and hesitate not to say that it is by far the best instrument of the kind with which I am acquainted. It is much more secure than most, and equally so with any other retentive apparatus. It can be worn constantly, day and night, and thus by keeping the walls of the neck of the sac in constant coaptation, produces that condition which is absolutely necessary to a radical cure; and I have seen several cases where such a result has been obtained by its use.

MOSES GUNN.
Professor of Surgery, University of Michigan.

UNIVERSITY OF MICHIGAN, Sept. 3, 1856.

From repeated examinations of the Truss of Mr. Pratt, and long familiarity with those who have used it. I do not hesitate to endorse the views of Professor Gunn, as to its excellence. S. H. DOUGLAS.

ANN ARBOR, Sept. 1, 1856.

I have witnessed some of the same results from the use of Pratt's Truss, as those referred to by Professor Gunn, and fully concur in the views and opinions he has expressed.

SAMUEL DENTON,
Professor of Theory, and Practice of Medicine in the University of Michigan.

Any one having a knowledge of the Anatomy of Hernia, and, able to comprehend the proper application of mechanical contrivance for its relief, can not fail to recognize in Pratt's Truss a practical principle, so well adapted, and applied, as to promise with a good degree of certainty a radical cure.

Having observed its effects in a few cases, I fully endorse the views of Dr. Gunn, and commend the instrument to the profession. Address letter to Dr. Silas Pratt, Ann Arbor, Mich.

L. G. ROBINSON, M. D.

Fluid Mognesia. By Fred'k Stearns, Pharmaceutist.

Owing to there being considerable demand for a solution of carbonate of magnesia, I have for some time past been in the habit of making it myself, having readily succeeded in forming a perfect solution of it by means of carbonic acid gas under pressure, and with comparatively little trouble or expense.

I believe nearly all Pharmaceutists supply their demands for this preparation with the imported article of Murray or Dinneford; now I have found these to be both *uncertain in strength* and *expensive*, and it may be of value to some of your readers to state the method I have adopted for preparing it, as follows:

℞. Sulphate magnesia, four pounds, (avoir.)
Saturated solution of carbonate Soda, *a sufficient quantity.*

Dissolve the suph. magnesia in one gallon of pure water, gradually add the sol. carb. soda until a precipitate no longer occurs, throw the precpitated magnesia upon a cloth filter and wash rapidly with pure water, recently boiled until that which passes

is tasteless, mix the moist magnesia with four gallons of water, and introduce the mixture into a close vessel, (I use an iron fountain employed in making mineral water,) and subject it to a pressure of carbonic acid gas, (generated by any of the usual methods,) equal to five atmospheres, say 75 pounds to the square inch, agitate frequently for four hours, or until it becomes clear; after filteration it is perfectly transparent and ready for use.

Those who prepare soda or mineral water for a beverage possess all the apparatus required for making this solution. The moist hydrated magnesia, when brought into contact under pressure with carbonic acid forms probably a *bicarbonate*, though the crystals deposited when the solution is exposed to the air are of the formula of the native carbonate (Mg O. CO 2) with three equivalents of water, these are very unstable, easily parting with a portion of their carbonic acid, and passing into the basic carbonates, consequently this bicarbonate can only be used in solution; it is slightly alkaline to the taste, and contains about 8 grains of anhydrous magnesia to the fluid ounce.

According to Sir James Murray, "the superior advantages of this preparation are, that possessing all the properties of magnesia in is general use, it is not liable to form concretions in the bowels,it corrects acidity and relieves heartburn effectually, without injuring the coats of the stomach—prevents the food of infants from turning sour upon the stomach—prevents the evolution or deposition of uric acid in gout or gravel—it is a pleasing sedative and aperient in cases of irritation or *acidity of the stomach*,particularly during pregnancy,febrile complaints, infantile disorders or sea sickness.

It is also useful when its alkaline and aperiant qualities are not objectionable for covering the taste of other medicines, such as bitter infusions, etc.

As a lotion for the mouth it imparts sweetness to the breath and cleanses the teeth from accumulating tartar.

The general direction accompanying the imported article, (which apply to the solution made as above,) are as follows:

For Gout, Gravel, Urinary Pains, Spasms, and Neurlgia.—Half a wine-glassful 2 or 3 times a day.

Heartburn, Nausea, Irritability of Pregnant Females, &c.—A wine-glassful to be taken when required, and repeated in half an hour if not relieved.

Pyrosis, Acidity of the Stomach, Sour Eructations, and Pain after Eating.—Half a wine-glassful to be taken after each meal.

For allaying Sickness, Irritation of the Stomach, Gastric Coughs, Head-Ache, &c.—Half a wine-glassful with a dessert spoonful of the Acidulated Syrup taken frequently, in an effervescent state.

Saline Draught.—To be taken the same as the last, with the addition of a little spring water, if more agreeable. In debility, cordials or tonics may be added.

Infant's Food or Drink.—To prevent the food of Infants turning sour in the stomach, and to regulate the bowels.—One or two tea spoonfuls may be mixed with the food, or given separately.

Aperient, and to preserve a moderate state of the bowels.—Half a wine-glasful night and morning. The effect may be materially increased by the addition of a tea-spoonful of any Acidulated Syrup, taken during the effervescence.

To correct the acidity of Wine, and to compose the stomach after hard drinking.—A wine-glassful any time after dinner, and repeated at bed-time if required, with or without bitters or aromatics.

In all cases the Solution may be taken alone, or mixed in a little water, sweetened, if more agreeable, and even heated, if required.

The Solution of Bi Carb, Magnis. is a good vehicle for the administration of camphor, eight grains of which can be dissolved in it, by employing the same methods, after which the officinal aromatic waters are prepared.

I have also found it suitable for forming emulsions with the fixed oils, Gum Resins, etc.

Combined with aromatics, as in the following formula, it forms a good carminative and aperient for infants and young children.

Take Oil Anise, two drops,
Oil Cinnamon, (Ceylon,)
Oil Caraway, of each one drop,
White Sugar, three ounces,
Rub the oils with the sugar thoroughly, add gradually
Fluid Magnesia,
Water, of each eight ounces,
Filter; dose from 1-2 to two teaspoonfuls.

Peninsular Journal.

Those of our readers who see the *Peninsular Journal* will have noticed in the September number an article of malicious import, reflecting upon the character and professional standing of Dr. Goadby. It seems that the editor of that journal has discovered that the "*ignorance, associations, and conduct of Dr. G. are such as to merit only contempt.*" Now this is pretty strong language, and coming from a journal, at a time when, from the temporary position of its senior editor, it may be supposed to exert an influence, the slander can have no other effect than to impair very seriously the confidence of community with regard to the *respectability* of Dr. Goadby on the one hand, and the knowledge of those subjects which he teaches on the other.

Unwilling to put himself upon the same level with his maligner, he has taken the preliminary steps to effectually remove the stigma by giving the editors of that journal an opportunity for answering to the libel before a court of justice. If any part of the allegation were true, we should discountenance such a proceeding, but as it is false, and had its origin in jealousy and malice, we can only regret that it becomes necessary to appeal to a legal decision for redress.

The author of the article, not satisfied with this notice of our senior, bestows a little of the same sort of compliment upon us, dignifying the sentiment, however, by a quotation from the "*Wise Man*," who says: "Answer not a fool according to his folly, lest thou be like unto him." Now, as we deem it but an act of charity to suppose that the writer was "*hasty*" in his conclusions, we shall only refer him again to the "*Wise Man*," and trust he will approriate that paragraph which says, "Seest thou a man that is *hasty* in his words? *There is more hope of a fool than of him.*"

Apology.—An apology is due for the delay in noticing *Carpenter on the Microscope*, and *Draper's Physiology*, as promised in our last. Pressing engagements, and the importance of the branches treated of in these volumes, requiring more time for their examination than we have been able to command, has occasioned the delay. We repeat our pledge to offer a somewhat extended review of both in our next issue.

An Evil Exposed, and its Remedy Proposed.

Dr. Sanford B. Hunt has presented in his leading editorial for September, some very *pointed* and forcible remark upon "*The Presidency of the American Medical Association.*" The independence and ability which characterize his pen in laboring to correct existing evils in the profession, as well as in the development and promulgation of scientific truth, has given to the *Buffalo Medical Journal* a commanding position in our medico-periodical literature.

We fully appreciate the comments which he has made upon the "machinery" which manufactures Presidents for the Association. and confidently believe they will be endorsed by every member of that body, who values the highest interests of the organization above clique subserviency and personal notoriety.

There is no doubt that the degrading tendency of the *evil* has done much to impair the respectability of the association, and therefore to paralyze, to no inconsiderable extent,its elevating and progressive influence upon the profession. It has stigmatized that body with the character and reputation for making *great* men out of very *small* material. Now this is carrying *mechanical improvements* a little too far. Let such facilities belong to the secular press, and the "pathies" and "isms" of the day; while to the association belongs the object for which it was organized—*the advancement of medical science.* Select for the presiding officers those who, in deserving the position as a reward of distinguished labor, will reflect honor from their attainments, upon the character of the association.

We trust that the amendment will have the effect ultimately to extinguish some of the *smaller lights* and give us an election that will be legitimate rather than accidental. To this end we make the following extracts:

"It is evident that, until it is put out of the power of the nominating committee to virtually elect the President, we shall forever be subjected to the rule of that happy individual who happens to be the Nestor of the place of meeting.

Gray hairs are honored at the expense of working men. Worse than this. To follow back the chain of promotion, we shall find that the associations take the man the nominating committee choose to give them, and the committee take the

man they are instructed to by the wire-pullers of the particular locality. In a small town, with from forty to fifty physicians, this matter can usually be cozily arranged among themselves, with more regard to their own interests than to the dignity of the association.

We regard the Presidency of the American Medical Association as an honor too high to be lightly bestowed upon any man. The consideration of locality is the last that should be thought of. It is nonsense to make it a mere compliment to a town in return for good feed and abundant champaigne. The occupant of that high station should be chosen from the profession at large. He who has labored; he who, through many years, has toiled to advance his profession; he who has built up for himself a name as a discoverer, or medical philosopher, and who, perhaps, has found no other reward than a good name for all his efforts; such an one is our candidate. Under the present system, we can only elect him by accident. Such men as Bartlett, Drake, Morton, Parker, Mott, or Gross, can never be chosen under our present system. Those of them who are dead never would, and those who live never will do the necessary work. The machinery by which Presidents are made, under the present constitution is very simple.

A special committee of one from each State is appointed by each delegation to nominate all the officers. This special committee is a small body of men, and will never have the courage to break down the strong precedent now established.

The nominating committee is a bad piece of machinery in some respects, and a very good one in others. We have shown where its faults lie. It only requires a moment's thought to perceive that it must very much facilitate the selection of a place of meeting, and the nomination of committees. Indeed the argument of convenience is so strong that we would willingly allow it the choice of all the officers except the Presidency, reserving that as a distinguished honor to come direct from the Association.

We propose the following amendment to the constitution:

Section IV.—Officers.—"The officers of the association shall be a President, four Vice-Presidents, two Secretaries, and a Treasurer. *With the exception of the President*, they shall be nominated by a special committee of one member from each State represented at the meeting, and shall be elected by vote on a general ticket.

The President shall be chosen by ballot of all the members, the first ballot to be informal, and the person receiving the highest number on the second ballot to be declared elected.'

Our amendment consists in the addition of the italicized portions of the present provisions."

Cochran's Commercial Institute.

We have received the "Circular and Catalogue of Cochran's Commercial Institute," established in this city, and are pleased to notice its contents. It contains all the items that seem necessary to impart requisite information to any who may desire to avail themselves of the advantages it affords.

We have long been convinced that an institution devoted to the systematic instruction of young persons designing to pursue a mercantile career, was a desideratum in literary and scientific pursuit. That commerce involves fundamental principles as essential to its practical development and success as the alphabet to chirography and composition, or the laws of gravitation to a rational system of philosophy, we think will not be questioned. Nor will it be denied that the science of trade, as applicable to our country, at least, has been imperfectly understood, and those rational principles that beget farseeing intelligence; something nearly allied to prescience, and enable their professor to calculate with an approximation to certainty, the approach of events and crises, and the influence these may exercise over business, and the interests classes and of countries, are but partially diffused. Hence it is believed the numerous wild and wreckless enterprises, the inappropriate investments of capital, the waste of time and effort, and the consequent embarrassments and failures, resulting in inevitable distress. Now it would appear that evils, such as these, might be abridged or greatly mitigated by a well ordered system of preparatory education. So far as we are informed, this collegiate institute is novel in its organization, and better adopted than any similar institution within our knowledge to accomplish the objects sought—not merely of imparting accurate knowledge of bookkeeping, and the general range of office and indoor operations of a mercantile house, but of enlarged views of political economy, which involves the whole science of capital; its uses and laws of increase, as well as its perversions and laws of depreciation and waste; and also a somewhat extended knowledge of commercial law.

It is understood, too, that the President has in contemplation, in addition to the courses of instruction already announced,

lectures on Phisiology, as applied to men in commercial pursuits. This meets our hearty approval, for when it is considered that mercantile men, and particularly those who are confined to the desk, are obnoxious, in a remarkable degree to diseases of the chest and head, its importance will be readily appreciated.

Judging from the catalogue of the two years, the institute has been in progress, we predict for it a popularity that will give it a permanent establishment as one of the fixed scientific organizations of our rapidly progressive country.

We cheerfully commend it to the respectful consideration of all who love learning, who appreciate principles as the basis of success,and who desire intelligence and stability in business operations. K.

Medical Periodicals in Europe.—We find in the last number of the *Boston Medical and Surgical Journal* the following statistics of the number of Journals of Medicine and Pharmacy now published in the different languages of Europe: German language, 58; Dutch, 8; Swedish, 8; English, 30; French, 47; Italian, 12; Spanish, 9. The Belgian journals are included in the same category as the French, and amount to 13 in number.

New Publications Received.

We acknowledge the receipt of *Wilson's Dissector's Manual*, by Hunt, and *Churchill's Diseases of Women and Children*, by Keating, from the publishers, through the courtesy of Messrs. Raymond & Sellick. Also the following monographs from the authors, viz: History and Statistics of Ovariotomy, by Geo. H. Lyman, M. D.; Essays on the Physiology of the Nervous System, with an Appendix on Hydrophobia, by Benjamin Haskell, M. D.; and Encysted Osseous Tumors, by Alden March, M. D.; for all of which we are truly grateful, and a notice of each shall appear in due season.

Opinions of Dr. Vache—Communicated to the Committee of the N. Y. Legislature.

You ask, "Is yellow fever communicated by personal contact, or by an infected atmosphere?" The first question I unhesitatingly answer in the negative; for, regardless of the inconclusive experiments of drinking black vomit, sleeping with the sick, and wearing the shirts of the dead, by individuals exposed to the *cause* that gave the disease to those from whom they were endeavoring to catch it, I have never known a person to contract the malady from a patient removed from the infected district; and I repeat that I do not believe in its possibility * To the second, I unequivocally reply in the affirmative. Whenever yellow fever has appeared, observation corroborates the fact. Commencing at a single point, the *secret agent* extends with measured steps, until it exhausts its virulence in the distance, proportionate to the quantity furnished by the source from which it emanates. Mysterious as it undoubtedly is, its slow and gradual approach fortunately gives timely warning of the danger, and allows thousands to avoid its grasp, by enabling them to mark, with almost unerring certainty, the *limits of its power* †

Let it be remembered that the malady has not appeared in this city for nearly a quarter of a century, and not since the present health laws have been rigidly enforced ;‡ therefore, let us not forget, in our zeal for innovation and improvement, the good old maxim, "Let well enough alone." Admit they are, in a measure, restrictive to commerce, and burdensome to the merchant; will any calm observer deny that they are alike protective of his life and conducive to his interest? The pecuniary loss sustained in a hundred years by the Quarantine establishment, cannot equal the ruin and desolation of a single season of the pestilence. Who does not shudder at the memory of closed dwellings, the suspension of business, the shunned city, the Quarantine abroad, and the sepulchres of hundreds, during the summer of 1822?

I have scarcely alluded, you will observe, to the epidemics which have prevailed in this city, at various periods; not because I think a disinterested review of the facts to be gathered from the archieves of the Board of Health would be uninteresting or uninstructive at the present day, but because I do not wish to revive the feuds of former times, when many of the parties to them are dead; and because I prefer confining myself, in a great degree, to the investigation under immediate consideration, and to the experienced views of men more recently familiar with the subject —*American Medical Gazette.*

*By this, it will be observed, that the detention of passengers is, in my own opinion, of doubtful utility. Their soiled clothing should, however, be washed at the Quarantine, and the contents of their trunks freely ventilated, before permitted to leave it.

†The small mortality in 1819 and in 1822 was attributable to the comparative depopulation of the infected districts, and to the avoidance of them by visitors.

‡And never will, as long as the statute remains as it is, and its provisions are observed *to the letter.*

THE

MEDICAL INDEPENDENT

AND

MONTHLY REVIEW.

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links Connecting the Vegetable and Animal Kingdoms.—Continued. By HENRY GOADBY, M. D., F. L. S.

Preliminary, to this however, we must refer, and with deep regret, to the hasty (?) conclusions of Prof. Ehrenberg. No one possesses greater estimation of this profound investigator than ourself. His labors in the field of science have been *great* and *indefatigable*; and in his old age he is yet verdant. No man has done more in the prosecution of a favorite science than he; his contributions are *immense*—would fill a volume! Still, we feel compelled to regard him as a man of "one idea;" every thing that is very minute, and especially if endowed with locomotion, *must be*, in his opinion, *an animal*. He, above all men, is inaccessible to the marvelous discoveries of those whose best energies are directed to the prosecution of *vegetable* physiology, and he entirely ignores the mass of astounding facts they have collected. But we, having no special ends to serve, can afford to exercise a more sober phylosophy; with the Professor, our regrets are constant at losing so continually long cherished pets which we had hitherto recog-

nized as animals; at the compulsion we feel, reluctantly to hand then over to the lower Vegetable Kingdom—convinced that it is inevitable, we succumb as best we may.

There are certain ramose forms found in the fresh waters which, although designated as purely *animal*, betray evidences of an adverse character.

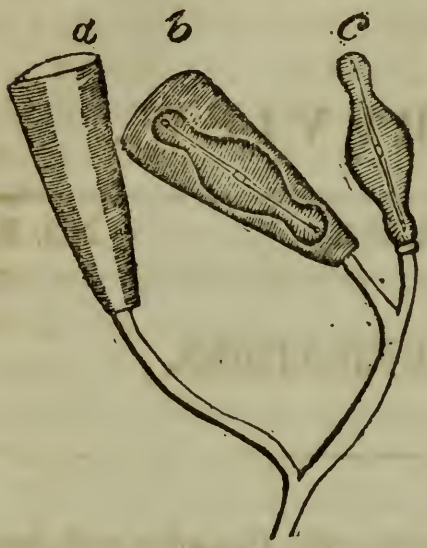


Fig. 90.

Amongst these, the Gomphonema ampullaria may be cited —(see fig. 90.) We here see a series of branched horny stems, at the termination of which is a cup shaped body (*a*) possessing lines upon its surface.

The *top* of the cup is wanting, and the contents (if it ever had any,) have escaped. We examine the next portion of the figure, *b*, and find a curious fiddle shaped something within the cup; moreover, it is evidently closed. We progress to stem *c*, and find that the cup is gone! and all that remains is the fiddle shaped body—now seen with great distinctness.

But what is the exact structure of this organism? The *stems* are undoubtedly *horny*, so are the cups, with the addition of silica forming the *lines;* the fiddle shaped bodies are entirely siliceous. In time, these latter become detached from their parent stems, and are incorporated in the masses of organic remains that may one day meet the eye of the microscopist; then, taking the Ehrenbergian rule, these vegetable formations would surely rank as *animals.* This *has occurred* in relation to the species we here indicate—it is found both *recent* and *fossil.*

Other vegetables are found in the fresh waters, presenting the *horny jointed stems,* but wanting, (as far as we know, not having had opportunity to trace the development in this species,) the silica. At the Queen's wharf, Toronto, C. W., may be found, a little below the surface, and attached to the wood

work of the wharf, dense masses of a beautiful plant figured at 91.

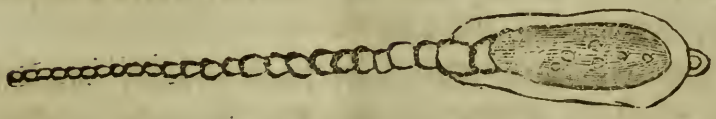


Fig. 91.

This vegetable will be seen to consist of a long-jointed stalk, the cells of which gradually increase in size until we reach the terminal cell, which is suddenly and remarkably enlarged.

Moreover, each joint presents a *square nucleus* within it. The large, somewhat *ovoid* body, seen in the last large cell, is evidently undergoing some great organic change, but more than this, we know not. Guided by the teachings of Gomphonema, it is fair to suppose that the large cell of this plant is provided with a lid, by the removal of which the contents are, in due time, disclosed: this lid is provided with a process not unlike *a ring*. In the state in which we found it, no trace of silica can be found. Is not this an *intermediate* condition, preparatory to the development of flinty matter, as seen in Gomphonema?

We have not yet succeeded in establishing a parallel between the Vegetable and Animal Kingdoms, in relation to the existence of this tissue, (silica). We have only endeavored to show that the thousands of microscopical forms, hitherto assumed to be such, are *vegetables*; and hence the question arises, "does any animal secrete, or deposit silica, in any of its tissues?" To this question we reply "yes;" silica, in detached, minute particles is found, in addition to *cellulose* and *starch* [p. 194] in the amygdaloid bodies of the human brain; how they get there, no one seems even to conjecture.

The production of silica *as a tissue*, seems to belong *exclusively* to the vegetable kingdom, and is, [in our opinion] characteristic of the plant. The attribute of, even the lowest animals is, *not silica*, but *carbonate of lime*; the corals and shells we have examined contain no trace of the former mineral; bones of the higher and lower animals are equally exempt from it.

But it may be urged that we have overlooked a most important, curious, and beautiful group of *animals*—for so they figure in the Classification of the Animal Kingdom by Cuvier, and Grant—*the sponges*. We will investigate this question: we

find that the Sponges, as a Class, present three different forms of axis—in other words, their skeleton exhibits a *triple* character, horny, calcareous, silicious.

For a century, naturalists have been greatly puzzled to find the exact position of this group. The Botanists claimed them, and the claim was acceded to; the Zoologists made a discovery, and demanded them back again as their property; then the Botanists establish a new fact, upon which they prefer a new claim; but subsequently the Zoologists came out with overwhelming evidence to substantiate anew their right and title to the Sponges. So obscure is the evidence, so very dubious, and unsatisfactory on *both sides*, that still it appears [to us] as far from settled as ever. In the Classification of the Animal Kingdom by Cuvier, and Grant, the sponges were admitted: on the contrary, Owen, subsequently followed by Rymer Jones, discards them.

The recent investigations upon the development of these organisms by Dujardin, Carter and Huxley, appears to furnish stronger evidence of animality than any that has yet been offered, although the facts established by these authorities are equally applicable to the Vegetable Kingdom.

The horny sponge of commerce, presents on its external surface an immense number of minute holes, or pores; these communicate with ramifying canals, which empty themselves into the large openings, or vents, also seen upon the exterior. The external surface is covered with a glairy flesh, which passes through the pores, and lines the canals and vents. In one species [Grantia compressa] this flesh has been found covered with vibratile cilia, by the action of which water is drawn into the body of the sponge, through the pores, passed onward through the canals, and discharged in a greatly accumulated stream by the vents.

In collecting sponges, great care is necessary to preserve this flesh; if it be lifted out of the water, only for an instant, the whole of the flesh falls off in a mass.

The dredge should be kept beneath the surface of the water, when a sponge is seen in it, and a basin lowered into its open mouth, and the sponge floated into the basin which will now be filled with water, and thus the flesh will be retained.

To determine if vibratile cilia be present it is only necessary to place some powdered chalk on the surface of the water in the basin, when, if the specimen possess cilia, the particles of chalk will be put in motion. It is desirable to note the species presenting these organs; but, as they are known to exist, beyond a doubt, in the species mentioned, they are *assumed* to belong to the entire group, and this is probably true, as the fact of the currents of water before described admits of no denial. The water, thrown out from the vents with great energy and decision, is found to contain at certain seasons of the year the reproductive germmules. These are endowed with great activity, and swim restlessly through the sea-water contained in a watch glass for a long period of time; at length they spread themselves out on its surface, to which they become attached, and proceed to develope themselves in a form resembling the parent. A marine papillated (or mammillated) sponge is represented at figure 92, where the currents of water, accompanied by gemmules are seen passing out of the vents. A section of it to shew its internal structure is shewn at 93.

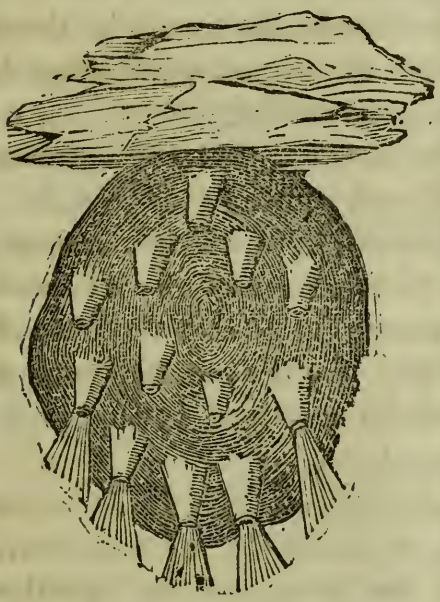


Fig. 92.

Fig. 93.

A few marine species present a skeleton (as the solid mineral parts are called) composed, no longer of a *horny* tissue, but of carbonate of lime (Grantia compressa); the whole of this particular group are few in number and minute in size

The calcareous spiculæ which designate this species, are triradiate in form, and figured at 94; in the calcareous sponges no fibrous net-work has been discovered.

Fig. 94.

All the fresh water sponges, together with a great number of marine species, have a siliceous axis: in these, the silica exists in the form of spiculæ of endless variety of forms, each, more or less typifying a genus. Usually more than one form of spiculum is found in each species.

In addition to the flinty matter abundantly found in these forms of sponges. there is a compact fibrous net-work through the substance of which the canals are excavated.

In the fresh water sponge (spongia fluviatilis), the spicules are of uniform size, slightly curved, and pointed at both ends.

They are so arranged as to form interstices, which constitute pores of the sponge: this will be best understood by reference to figure 95, which represents the arrangement and the form of the spicules in this species of sponge. In the centre is seen a reproductive gemmule, many of which are found in the specimen from which the figure was copied.

Fig. 95.

Another fresh water sponge, Halicondria fluviatilis, shews a similar arrangement, differing from the former in the spicules being arranged, not singly, but in bundles.

The greatest variety and beauty in the forms of the spicules is met with in the marine sponges; thus a species of pachymatisma present two distinct forms, as shewn in figure 96; one,

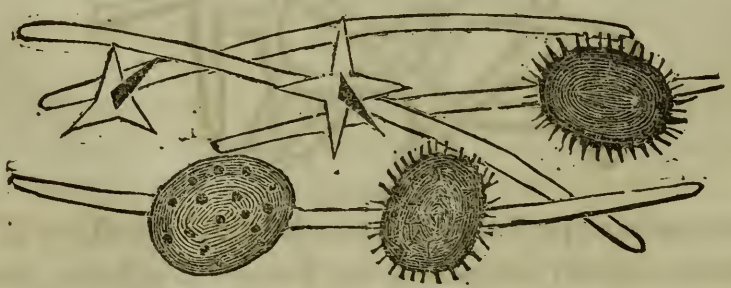


Fig. 96.

consisting of very large spicules, the ends of which appear to be

broken; the other form is minute and stellate. In this species are a number of gemmules, also siliceous (the sponge was boiled in strong nitric acid) some of these appear to be tolerably smooth, whilst others are hirsute, i. e. covered with very minute spicules.

Another species (Pachymatisma Johnstoniana) offers large and remarkable forms, such as are represented at figure 97.

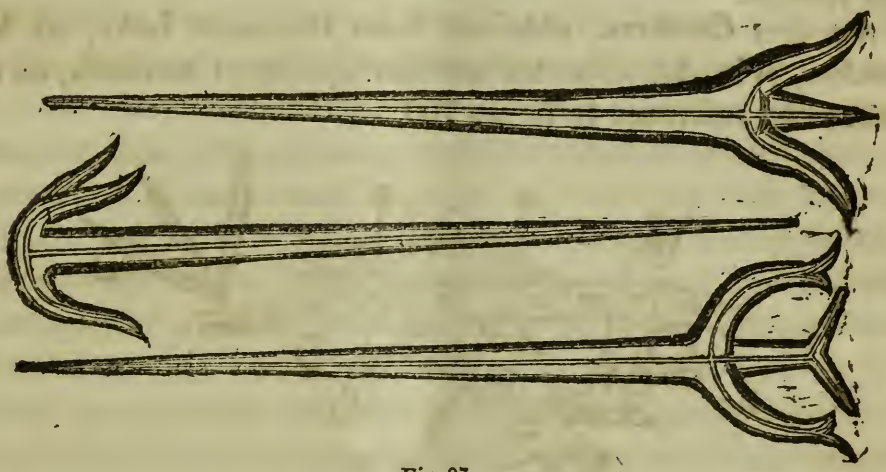


Fig. 97.

These appear to have *hollow cavities*, which are said to be filled with organic matter.

But the most extraordinary and beautiful spicules are found in Tethy's lyncurium, found in Australia. Here, in addition to long, curved forms, are a number of globes, beset with sharply pointed, four-sided processes—presenting a series of stars of exquisite beauty! figure 98. In some sponges, in place of spiculæ, particles of sand are found imbedded in the horny tissue, of much uniformity of size.

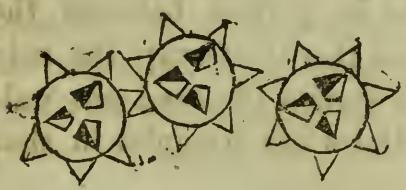


Fig. 98.

Such then are some of the chief particulars in relation to the structure of the sponges, which, for reasons hereafter to be stated, we still incline to believe, belong to the vegetable kingdom.

We would now direct attention to a remarkable peculiarity which characterise some species of Conferva, namely their aptitude for collecting siliceous materials.

We present a figure of Conferva which we found in Lake

Michigan, at Chicago' (figure 99). It will be seen that this

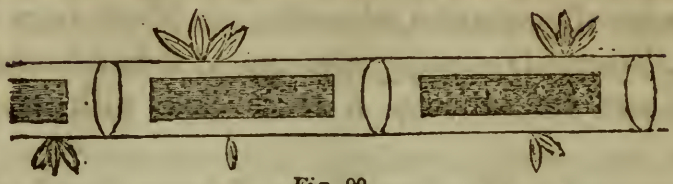


Fig. 99.

plant has appropriated naviculæ in great abundance, but of one species.

Another Conferva, obtained from the same Lake, at Milwaukee, Wis., has collected another species of navicula, as will be seen by reference to figure 100.

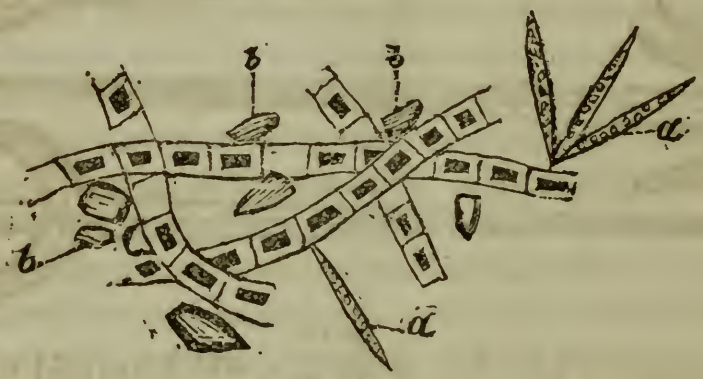


Fig. 100.

The desire for the procuration of flint, in this species, does not end with naviculæ, as we find in addition a great number of flinty particles of sand, of all sizes, *firmly* adhering to the plant, or imbedded in its meshes. The naviculæ are shewn at *a. a.* and the sand at *b. b.*

Now here the analogy appears to be perfect between the last mentioned species of Sponge, and this Covferva; the only point of difference being that, in the former the sand was uniform in size, whereas here the particles are irregular in that respect.

If the sponges really be of animal nature, they must possess capabilities of assimilation greatly transcending all other animals; we cannot at all comprehend the possibility of an animal feeding upon, digesting, and re-producing silica in a form at once definite and specific.

To be continued.

ARTICLE II.—On the Structure and functions of Insects. Continued. By HENRY GOADBY, M. D. F. L. S.

Cuvier divided the Animal Kingdom into four sub-kingdoms, from characters chiefly derived from their external conformation. Thus the Vertebrata, included all those animals found to possess *a bony vertebral column*, for the transmission and protection of the spinal cord. The next sub-kingdom comprehended all the *soft bodied* animals, such as slugs, snails, Oysters, Clams, and the like; and these were called Mollusca. The third sub-kingdom was formed of animals all of which possesed *articulated* (jointed) *locomotive organs*, such as lobsters, crabs, spiders, insects, and their congeners.

The fourth, and last sub-kingdom was constituted of animals whose bodies more or less *radiated from a central spot*, such as Star-fishes, Jelly fish, or Acalepha, Polyps, and Animalcules; from their peculiar structure they were called Radiata.

The ever restless, and busy mind of man cannot stand still; the more we know, the more we feel we have to learn, and the more we *desire* to know. Hence it happened that another and a younger mind began where the great naturalist left off, and by pursuing a very different course of investigation, namely by peeping a little into the *interior*, was induced to form other, and more reliable and accurate characters as a basis of classification than had hitherto been proposed.

Dr. R. E. Grant, of Edinburgh, offered some 30 years ago a classification of the animal kingodm which should be based upon the developement of the *nervous system.* Hence the new classification as compared with Cuvier's, stood thus:

CUVIER.	GRANT.
VERTEBRATA,	SPINI-CEREBRATA.
MOLLUSCA,	CYCLO-GANGLIATA.
ARTICULATA,	DIPLO-NEURA.
RADIATA,	CYCLO-NEURA.

The Cerebro—spinal axis of man, and all vertebrates, originated the expression by which Grant designates this sub-kingdom.

The Mollusca, were assumed by this author, to possess a nervous cord which surrounded the æsophagus, and upon which

ganglia were placed; hence *Cyclo-gangliata.* The nervous system of Cuvier's Articulata is found to consist, primarily, of a *double nervous cord,* hence *Diplo-neura,* but on which ganglia are more or less found.

The last sub-kingdom, the Radiata of Cuvier, present (in the Star-fishes, according to Teideman) a nervous ring surrounding the oral aperture, but *without any ganglion,* therefore *Cyclo-neura.*

This clasification was unquestianably *an advance*; but another man, *younger* than Grant, and newer to science, desired to *prove the facts* upon which the latter system was founded, and this man was Owen.

With regard to the Vertebrate division but little could be done—Cuvier's *external* characters had covered the ground, and the nervous system, was found to be arranged on a uniform plan.

However in place of "Spini-cerebrata," Grant, Owen proposed *Myalencephala,* as somewhat more expressive, the word being derived from *muelos,* marrow, and *egkephalon,* brain.

When the learned professor,examined the *molluscous* animals, he found Grant's character to fail; in this class (as we happen to know by repeated, careful dissections of its varied members) a nervous *ring, beset with ganglia,* is *not* found. At most, it is a *nervous commissure connecting the cephalic ganglia,* and passing, not *around,* but *behind* the æsophagus. Then the *pedal* ganglia (in those molluscs possessing a foot) and the *branchial* ganglia are variously disposed—now in one place, now in another—hence Owen, with far greater propriety, called Cuvier's Mollusca, Heterogangliata.

The designation of the next sub-kingdom, by Owen, as compared with Grant, is of less consequence; and whether we express the "double nervous cord" with Grant, or speak of the symmetrical arrangement of the ganglia in this class,with Owen, who calls them from the latter circumstances, Homogangliata, matters not, either expression being equally correct.

We come to the last division of the animal kingdom, *Radiata* of Cuvier, *Cyclo-neura,* of Grant.

Owen is content to take the ipse dixit of Teideman in relation

to the Star-fishes; moreover he has a preparation of Asterias papposa, in the college museum, prepared by the hand of the immortal Hunter, but whether the auther designed it to represent the *nervous system* (which it certainly does not,) or a portion of the *vascular* system [which it assuredly is,] is left to conjecture; but inasmuch as Teideman made his dissection long subsequent to Hunter, and proclaimed it [in mistake] as *nervous*, the learned professor, in the absence of Hunter's notes upon the subject, concludes that Teideman is correct in his observation. For those animals of the *Radiate* division in which he believes a *nervous* system has been recognized, he proposes the word *nematoneura*—nema, a thread, neuron, a nerve. But in common with many others, he is by no means satisfied that a nervous system has been discovered in some of the Class of Cuvier's Radiata; and for these, he proposes a very significant designation—*Acrita*—confused.

The lowest animal [in its organization] that we are acquainted with, exhibits all the *manifestation* of a nervous system, whether it can be detected or not.

It is presumed, therefore, *to exist*, but under such circumstances that even the microscope fails to detect it as an independent organism—it is *diffused* or *confused*, and hence the expression is a good one.

The reader will perceive that the animals whose structure will from the theme of this, and succeeding papers, are equally well defined by all the authorities quoted; so far therefore, there can be no difficulty in their *identity*, although a doubt may arise as to their true position in the scale of being. It has been seen that Cuvier, and Grant, agree in assigning them the *third* division; but Owen, with more propriety, as we think, places them on the same plane with mollusca, giving them however, precedence. Whoever takes a calm, dispassionate view of the habits of the Articulate, as compared with the Molluscous animals will be likely to adopt Owen's view in this respect. Many thousands of the Mollusca, are *fixed* in their position, on submerged rocks and otherwise; presenting mere inanimate masses, composed of little more than a stomach, endowed with an insatiable appetite for food, and an alimentary canal;

with a nervous system of no greater capability than is sufficient to guide it in the selection of food, and to warn it to close its valves at the approach of danger. Surely such a mass of *nutrimental organs*, illy compares with an *active nervous, irritable insect.* In the former, one great attribute of animality—locomotion, may be *entirely* wanting; whilst in the latter, not only may there be the greatest activity of *foot*, but even *wings* may be super-added. The more perfect the *functional* development of an animal, the more will the nervous system assimilate perfection.

This subject is susceptible of another view: in estimating the capabilities of the human brain it is usual [among other characteristics] to consider its *firmness*, and *compactness*; to ascertain in fact, the *quality* of the nervous matter composing it. A man may possess a *large* brain but watery, loose, and *weighing but little;* whilst a brain of less dimensions *compact and firm* in texture, will *weigh* heavily.

We believe that comparative anatomy fully justifies this view, and [if we are correct, we would point attention to the *loose* and *watery* constitution of the ganglions and neurine of *all* the mollusca, differing in degree, however, in the several orders, with the remarkably *firm*, and compact arrangement of this structure as exhibited throughout the articulate sub-kingdom, although we admit there is as much variety in this respect here, as in the mollusca. But insects are pre-eminent for the possession of this characteristic, in which they agree with the Scorpions, and Spiders, amongst the Arachnida, and with the Lobsters, and Crabs, amongst the Crustacea. Now all these creatures are singularly conspicuous for the great nervous energy they display. Our experience of the *composition* of the nervous system of animals, as associated with their *known capabilities*, leads us to conclude that this constitutes an important element for consideration, and to our views, the articulata, should unquestionably take precedence of the Mollusca, in any well digested arrangement of the Animal Kingdom.

That the power of locomotion exerts an influence on the development of the nervous system seems evidenced by the fact that those molleusca endowed with volition present more firm-

ness in the structure of the nervous system than the fixed animals of this class. In the Cephalopods, probably the most active and energetic of the whole class, the nervous system will compare favorably with some of the vertebrate animals.

The mollusca must be dissected under water; should the operator chance *to wound* the neurolemma, the soft, pulpy neurine will ooze out, dissolve in the water, and leave a series of empty transparent tubes behind. Not so with an insect; wound the nerve sheath as you will there is no escape of neurine.

Examined by the microscope, too, the insect nerve presents the well defined tubuli with their contents; not so the molluscous nerve. From these considerations we conclude that the Articulate division should follow the vertebrata, to which in the microscopical character of their nervous system, and its *quality*, they are more nearly allied.

The characters which distinguish an insect from every other animal in existence are few, simple, and definite. The body is primararily divided, as before mentioned, into three distinct parts--head, chest, and abdomen ; in addition to these characteristics, there are always found *three pair of legs*—neither more nor less.

Thus, if the creature under examination, no matter what its size, should chance to possess *four pair of legs*, it is not an iusect, but belongs to the class Arachnida. With four pairs of legs, the body will invariably be found divided into only *two portions*—the head and chest being soldered together, constituting the Cephalo-thorax, and the remainder being the abdomen or body. The class Arachnida, contains the Spiders, Scorpions, and Mites; by the rule, above given, it follows, therefore, that the Acarus Scabiæi is not an *insect*, but a *Mite*. But the specimen may chance to have *five* or even *six pairs of legs*, with the body still possessing but two divisions, is this an Arachnidan ? By no means ; such an animal belongs to the highest class amongst the articulate sub-kingdom—the Crustacea.

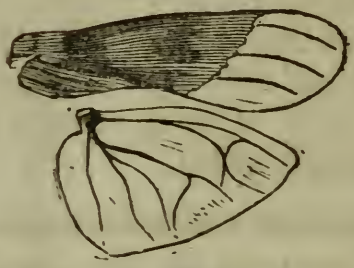
It is impossible to understand anything of this science without the aid of a system of classification.

The first classification of insects of any consequence, was that proposed by Linneaus. He grouped together his specimens by the

simple character of the structure of the wings; hence this has been called the *Alary* or wing system. We offer the following illustration of it:

COLEOPTERA,
koleos—pteron,

HEMIPTERA,
emisus—pteron,



LEPIDOPTERA,
lepis—pteron,

NEUROPTERA,
neuron—pteron,

HYMENOPTERA,
hymen—pteron,

DIPTERA,
dis—pteron,

APTERA—*a—pteron.* WINGLESS.

The true Crustaceous beetles formed an order which he de-

nominated Coleoptera, from *kolcos*, a sheath; and *pteron*, a wing; which refers to the wing-cases, or elytra with which all these insects are provided.

The second Order contained the tree bugs, and is called Hemiptera, from *emisus*, half, and *pteron*, wing, in allusion to the upper pair of organs which are only partly wing-covers, one half of which is crustaceous, the remaining half membranous. The third order is known as Lepidoptera, from *lepis*, a scale, and *pteron* a wing, this order includes all the butterflies and moths.

We next have the Neuroptera, from *neuron*, a nerve, and *pteron*. This name alludes to the great, and unusual ramification of delicate bones through the organs of flight which were called *nervures* by the older entomologists. Fifthly we have the order Hymenoptera, from *hymen*, a membrane, and *pteron*.

Here we have four wings, all of them equally membranous; the order contains, bees, wasps, Ichneumon flies, and their allies.

Sixthly, we have the Diptera, from *dis*, two, and *pteron*. This order includes all the insects with only two wings.

Seventhly, and lastly, the order Aptera, from *a*, without, and *pteron*, wing. This order was a perfect chaos of confusion; it contained in fact every insect, and animals not insects, that could find no place elsewhere. Crustaceans, Arachnidans, Myriopods, &c were crowded into this order.

The preparation, of which we have given a copy was made upwards of thirty years ago, the intention being to display the Linnean orders *at one view* by the oxy-hydrogen microscope. We submit a magnified view of it as the best mode of explaining the principles on which this classification is founded.

A careful examination of the figures will satisfy the reader that this system had much to recommened it to general adoption; a beetle no matter *what its size*, has always a pair of dense crustaceous covers to protect its wings, which, when unfolded for the purpose of flight are *always much larger than the case that covers them, and shaped as represented* in the figure.

So too, the semi-crustaceous superior organ together with the peculiar shaped wing, is equally characteristic of many, *but not all*, the tree bugs.

Butterflies and moths are easily known by the scales which cover their entire bodies, and which come off so plentifully on our fingers and thumb when we touch them.

The beautiful lace-winged flies, with their light, and gauzy organs of flight are conspicuous.

The bees, wasps, and other *hymenopterous* insects, are easily defined by the inequality of size in their wings, no less than the peculiar manner in which *the under wing fits into the superior one.*

The two winged flies admit of no doubt.

The greatest difficulty however, has always been with the Linnean *apterous* order of which we shall have more to say, hereafter.

All these Linnean characters are so very obvious—so easily accessible, they may be detected whilst an insect is on the wing —that we still regard it as a most useful, and desirable system: one that may well supply the want of all those persons whose knowledge of insects is limited, and who are not engaged in forming a collection.

The number of insects with which we are acquainted in modern times, compared to those known by the great Sweedish naturalist have rendered other systems—more complicated, and perfect—necessary. Thus Fabricius, a pupil of Linneaus found his master's classification unsuited to the entomological wants of his day, and proposed one based upon the structure of the mouth.

It is unnecessary, because foreign to our purpose, to describe the various systems proposed, or to point out the advantages belonging to them respectively; suffice it to say, that the modern classification of insects embraces the principles, combined, of the authorities mentioned, and others.

From the structure of the wings, the mouth, and the number of joints in the feet, insects are now classified and arranged.

In all the articulata the skeleton is placed on the external surface of the body. In insects it is horny, sometimes hard and brittle as in the beetles, at other times soft and elastic, as displayed usually in the larva of Lepidoptera, and in the perfect insects among the Diptera.

To be continued.

ARTICLE III.—Puerperal Insanity. A paper read before the Detroit Medical Society, on the question—"Is puerperal insanity a disease arising from nervous excitement, or from inflamation? By EDWARD KANE, M. D., Chairman of Committe.

Few of the maladies to which humanity is subject, are productive of more suffering anxiety, and disruption of the affections than insanity; and pehaps there is no form of it, that gives rise to a greater amount of terrible affliction and harrassing solicitude to all who are interested, than that now under consideration. Occurring at a period when happiness is expected and generally realized and a tender object is just brought into existence, whose life and growth are so dependent upon the nurture, and care of her who gave it birth, none can have difficulty in appreciating the grave character of the malady, the anxiety of friends and the weight of responsibility that devolves upon the medical adviser. Before proceeding further however we deem it not inappropriate to premise a few propositions that seem at least to involve most that is essential in an elementary point of view in the consideration of the subject.

First of the period of life most obnoxious to the disease—it is believed that it is almost peculiar to the younger class of females and that the liability to it diminishes as age advances. This conclusion finds substantial confirmation in the following from Dr. McDonald, Physician to the Bloomingdale Assylum for the Insane, published in the N. Y. Med. Journal, Vol. 1st, Page 280. He avers as the result of his investigations in that institution—"that young women are much more obnoxious to this malady than those more advanced, and the susceptability of females to it diminishes in about the same ratio that their years increase." The same important truth finds ample support in a learned paper communicated to the society of medicine of Paris by M. Esquirol, embracing his observations for the years 1811, 1812, 1813, and 1814. Therein we learn that during these four years 1190 cases were admitted to the hospital Sal. Petriere, suffering from mental derangement, 92 of whom, not far from 1-11 of the whole "had become deranged after delivery, during or immediately subsequent to the period of suckling."

Of these 92 cases the age of 22 of the patients was from 20 to

to 25 years. Of 41, from 25 to 30, and 12 were over 30. Nor is it less subtantiated by the general consent of authors,from the fact that unmarried females who feel deeply the degredation of their situation are oftener attacked with puerperal mania than any other class of patients, and especially by Esquirol, who states that of the above 92 cases, 29 occurred in unmarried females."

Second—It is more liable to supervene upon first, than upon subsequent confinements, *i. e.*, it is uncommon in its first manifestation to occur, if the patient has passed through her first parturiency without its supervention. The conclusion thus deduced from experience, we find confirmed by Dr. McDonald, when he says "that women are more liable to this disease at the first, than at subsequent parturitions." It is believed too, that the doctrine announced in this proposition, will be found to accord with extended experience, and the general sentiment of the best authority. We are inclined to the opinion also that the same doctrine finds ample support, in what seems conceded to obtain in reference to insanity in general—the pre-disposition to mental aberration, being much greater in early than in advanced life. Hence, says Dr. Rush, "there is a greater predisposition to madness between 25 and 50 than at any of the previous. or subsequent years of human life."

Third—Hereditary influence has less agency in giving rise to puerperal, than to any other of the forms of insanity ; it is therefore, observed by Dr. McDonald, already cited, that hereditary pre-disposition to this form of insanity, exists in less than one sixth of the cases.

Fourth—We think it may be assumed that this variety of derangement, rarely, if ever, occurs in any other habit or temperment, than the highly nervous, or nervo-sanguineous, and in which this predominent tendency gives rise to what may perhaps be denominated the hysterical diathesis. Nor do we question that the principle here offered will be fully sustained by intelligent observation and the aggregate opinion of the best writers on this disease; hence says Copland "in most cases of mental disorder, during pregnency and in all that I have seen there was either an hereditary predisposition to it, or the patient

had been previously subject to obstinate hysterical affections and had experienced overwhelming or intense emotions of the mind."

Fifth—That those exciting causes that are most actively, perhaps exclusively, operative in the production of the disease, are of a moral nature, and that it is therefore the most readily curable of any of the varieties of intellectual disease.

We find this position supported by the following from a learned author viz: "that moral causes are operative *only* and that consequently puerperal insanity is one of the most curable forms of mental disorder." Esquirol declares that in the higher ranks of society the proportion of puerperal maniacs was not less than one seventh of the whole number of cases occurring among females and that "fright was the most frequent cause"

Sixth—Puerperal mania strictly is to be distinguished from a condition of mental purturbation which it is believed has been confounded with the idopathic disease, which is of brief duration, manifesting itself in highly impressible constitutions "when the head of the child is passing through the os-uteri, or pressing on the perineum," and noticed by Montgomery and Churchill. It is no less important to distinguish it from the delirium of fever, the mental perversion of phrenitis and the divergencies from normal intellectual manifestation incident for a time to many other forms of disease.

Seventh—There are two principal periods in connection with parturiency, during which the disease makes its appearance. First at some time (by no means uniform) in the progress of gestation or soon after delivery and second, at a later period, perhaps months after that event. The former while the system is laboring under the derangements consequent upon the altered condition of the economy, induced by pregnancy or while it has not recovered from the shock occasioned by labor—the latter while it is suffering from the prostration and depressing influences, of more or less protracted lactation. That pregnancy gives rise in most constitutions, and especially during first pregnancies, to marked derangements of the economy, has not escaped the notice of the most careless observer. Copland remarks: "Pregnancy generally occasions more or less excite-

ment of the nervous and vascular systems, and sometimes gives rise to various morbid impulses, or aberrations of mind, and especially in females, hereditarily predisposed to insanity."

Eighth.—As there are two principal periods of its approach, so it presents in two distinct and well defined forms ; one in which all the mental and emotional manifestations are remarkably exalted—there is high excitement and furious madness ; another, in which the chief characteristics are those of more obstinate melancholy. While on this point it may not be inappropriate to remark that of these; the first will be found most amenable to treatment, medicinal and moral or disciplinary and, therefore, more readily curable, while the second is much more persistent; less subject to the salutary and corrective effects, of even well adapted treatment, and, in a proportion, we think not yet statistically determined, less frequently cured, but even these, in by far, the majority of examples, recover after a greater or less length of time. At a period, not far remote in the history of obstetrical science, an opinion prevailed that puerperal insanity seldom or never terminated fatally, and at the present time, the accepted doctrine is, that it rarely results in death. So prevalent, indeed, was the former idea, that the astute and experienced Dr. Baillie, in the early part of the present century, observed, in reference to a case concerning which he was consulted, "that the question was not whether the patient was to recover, because of that he had no doubt, but how long the disease was to last." The fallacy of the generally received opinion, and of the judgment of Dr. B. in particular, critically learned as he was, in regard to the manifestations of disease, and the morbid changes it induces, was emphatically taught by the result of the very case, concerning which he pronounced thus dogmatically. The patient died in the course of one week from the date of the consultation.

Mr. Hunter participated in the same opinion, as indicated in the following, from his manuscript lectures, and quoted by Gooch. "Mania," said this eminent practitioner, "is not an uncommon appearance in the course of the month, but of that species from which they generally recover." In the comments of Dr. Gooch upon this passage and connected remarks, he ob-

serves, "there are two forms of puerperal mania; one of them is attended by fever, or rather by a rapid pulse; the other is accompanied by a very moderate disturbance of the circulation. Cases of the latter kind, which, happily are by far the most numerous, terminate in recovery; the former are generally fatal." The observations of Esquirol, Haslam, and Burrow's indicate a much more extended ratio of mortality. According to the former, of ninety-two cases enumerated, fifty-five recovered, and six died, while he reports thirty-one as incurable.

Haslam remarks that "only fifty recovered of eighty patients admitted to the institution under his care, while thirty-five remained, as incurable." The experience of Dr. Burrows indicates nearly the same ratio of recoveries. He mentions "fifty-seven cases, of which thirty-five recovered, eleven remained uncured; of the recoveries, twenty-eight took place within the first six months." Of the whole number it will be perceived that eleven terminated in death. Whether, however, the reports of hospitals offer a strictly truthful account of the average fatality of the disease may, perhaps, be questioned. On this point Dr. Gooch has the following plausible remarks: "The records of hospitals contain chiefly accounts of cases which have been admitted because they had been unusually permanent, having already disappointed the hope which is generally entertained and acted upon, of relief by private care; the cases of short duration, which last only a few days, or weeks, and which form a large proportion, are totally overlooked, or omitted, in the inspection of hospital reports."

Herein, it is presumed, will be found an explanation of the proportional mortality, shown by the reports of hospitals. In this connection it may be observed, in the language of a learned author, "as a general principle, the disease may terminate in one of three ways—in death, in perfect recovery, or in fixed, settled and permanent mania." Again, "the sooner the attack appears after delivery, the more excited the patient is, the more rapid the pulse, the more perfect the want of sleep, the greater the heat of the body and the more closely it appears allied to an inflammatory state, the more likely it is to terminate fatally." On the contrary, if the melancholy be

deep and overwhelming, if the patient be taciturn and obstinately perverse, the probability of its persistence and ultimately taking on the character of unyielding mania will be greatly enhanced. But as observed by another, "it is highly consolatory to know that there is little chance, indeed, of the disease becoming confirmed into a continued maniacal disposition." Says Ramsbotham, "I never, myself, knew an instance in which this sad result took place." One example only has fallen under our observation, and Dr. Gooch avers that no more than two have fallen under his notice, and one of these "had been disordered in her mind before marriage."

Let us now examine more immediately the import of the question and the pathological doctrine it involves. It seems to have been contructed with considerable caution, as if to get rid of an obsolete word—a word which, perhaps from the indefiniteness, if not inappropriateness with which it is often used, the committee who propounded the question might have deemed ought to be obsolete, we mean *irritation*, hence we suppose the use of the phrase *nervous excitement* instead. It might, likewise, have been desired to exclude from the scope of the question some antiquated or exploded doctrine. Now for the sake of convenience, we propose to use the term irritation, under a specific definition, and the expression nervous excitement as synonymous. By irritation, then, we desire to be understood to mean a morbid exaltation of the vital actions of a particular tissue. or system, relatively to the vital states of other parts, or of the whole system, not amounting to inflammation.

By nervous excitement, we mean a like morbidly active or exalted condition, either as regards strength or rapidity of movement of vascular action, not sufficiently intense to constitute inflammation, and associated with a greater or less degree of equally morbid nervous impressibility. This may characterize the state of a part or of the whole system. Thus, it will be perceived, we makê them to mean, as nearly as possible, the same thing—both are predicable of the vital actions of a part or of the entire organism. They will, therefore, in the further prosecution of the subject be used indiscriminately.

In answering the question, then, from a consideration of the

principles involved in the foregoing propositions, as also others to be referred to, as we proceed, we conclude that puerperal insanity may, and often does, arise from either one or other of the conditions or pathological states mentioned therein; *i. e.* from nervous excitement or from inflammation—the former, in the greater majority of examples. When, therefore, we consider the doctrines of the first and fourth—that the younger class of females and those of the nervous or nervo-sanguineous temperament, and especially the hysterical, are almost exclusively the subjects in which it manifests itself, we find it somewhat difficult to conclude otherwise thau as just stated, that, by far the greatest proportion of cases has a condition of mormid nervous excitement—irritation—as the basic pathological condition whence they arise. Doubtless, it will be conceded that both the period of life and the peculiar temperament mentioned, predispose, in a remarkable degree, to diseases of irritation. "The facility," observes an experienced practitioner, with which irritation may be produced, depends much upon the general condition of the system. Firm and vigorous health presents the greatest resistence to the action of irritant causes. When excitability is distributed in just proportion, throughout the frame, and each organ performs its function duly, the usual causes of disease, finding no weak point to assail, will often pass harmlessly by. Elevation above the standard of health, and depression below that standard, equally provokes the attack of diseases of irritation." Now, a habit that is plethoric, abounding in rich blood, notwitstanding the countenance may bear the impress of health, with vigorous digestion, energetic nutrition and other analogous conditions of essential functions, is not necessarily evidence of substantial health. Indeed, if the expression be admissable, so abundant is health, so intensified are the susceptibilities and so nearly morbid are the vital movements of the economy, thát a subject, thus conditioned, is "always on the borders of disease." When to this intensity of susceptibility, this exuberance of health, is superadded, as is, not unfrequently the case, the charasteric diathesis, already defined, none, we infer will question the deduction, that the physical condition, induced by pregnancy, parturition and lac-

tation, all place the constitution in the most favorable state possible, under the action of appropriate exciting causes, for the development of some form of irritative disease, and in a peculiar sense, the malady, we are now considering. Moreover, if inheritance can be reasonably predicated, the point we are seeking to establish, will be more clearly obvious. If the principles of the second and fifth propositions be admitted as tenable, that puerperal insanity, almost always, in its primary attack, occurs during a first pregnancy or in association with a first parturition and that the exciting causes are well nigh exclusively moral, it seems not illogical to conclude that mental alienation, supervening under these circumstances and induced by such causes, must arise from abnormal nervous excitation. When, also, the disturbing influences of a primary pregnancy and its attendant circumstances, parturition and lactation, the shock imparted by labor, and the not unfrequent depression and irritability, arising from incident hæmorrhage and other concomitant drains are duly weighed, there appears but little room to doubt that most examples of the disease can scarcely have their origin in any other condition than that of irritation. The entire phenomena of pregnancy, parturition and lactation are new; the constitution is entirely unaccustomed to them, hence, from these considerations, alone, it seems not unphilosophical to conclude that, if disease ensue, of whatever character, whether corporeal or intellectual, its predominant characteristic would be that of nervous excitement or irritation. Further, when these several cirumstances together with the character of its appropriate exciting causes and the highly impressible diathesis of its victims are considered collectively, the argument would appear conclusive. The condition of the economy in all respects is such as to predispose to diseases of a highly irritable nature. "A system, enfeebled," says another, "by depletion, by abstinence, by imperfect digestion, or by any other cause is, perhaps, not less liable to disorder from over excitement, but the irritation, in this case, is apt to take place in a different order of parts, and to present different phenomena. Instead of attacking the capillary bloodvessels, and exhibiting excessive vascular action,

it is disposed to seat itself in the nervous system and to take on the form of neuralgia, spasm, convulsion, or other nervous disease."

The functions are often very much deranged, without any discoverable organic affection and with little disposition to assume the inflammatory condition. If the malady be complicated with adynamic fever, as in certain constitutions, it is, or if it assume an analogy to mania-a-potu, a fact, by no means uncommon, then, in either case, no one can doubt its origin, in abnormal nervous excitement. But there are other sources of argument. Passing, however, for want of time, considerations having reference to the forms, in which it presents, and speculations, by which to acccunt for those forms, as well as other points, not less interesting both to the pathologist and therapeutist, we proceed to offer further testimony, derived from necroscopical investigations and from the accepted principles of treatment, applicable to the disease. It is to be regretted that the record of necroscopical researches, in puerperal insanity, is not sufficiently extensive, nor yet, perhaps, sufficiently precise, to establish, with certainty, the prevalent pathological condition. As, however, it bears a near affinity, in its sensible phenomena, to insanity, in general, we may derive important aid, in our conclusions, by referring to what is known, in regard to the pathological manifestations, which it affords. Morgagni was among the earliest cultivators of pathological anatomy, if, indeed, this department of our science may not be said to have originated with him.

In the seven or eight dissections which he made, after death, from insanity, the substance of the hemispheres of the cerebrum were found firmer, while that of the cerebellum was less firm than natural. In one example, "the white substance of the cerebellum was hardened, of a brownish hue, and its bloodvessels, as well as the plexus choroides were much distended with blood." In another, the hemispheres were hardened, while the fornix was softened with fullness of the cerebral vessels and adhesion of the pia-mater. In another, still, the meninges and plexus were injected, the cerebrum, hardened and the cerebellum, softened. By the same author we are told that he

found collections of serum in the ventricles, and in the tissue of the pia-mater. Greeding's investigations, post-mortem, were more extended and various, and the following may be stated as a summary of the results of his observations; thickening of the cranium, in ordinary cases of insanity; a like fact, in a given number of cases of raving madness, and also, in certain examples of idiotism; softening of the brain, in cases of insanity, complicated with epilepsy, wasting of the optic-thalami, in two cases of dementia; both enlargement and contraction of the ventricles; serous collections in the cavities, or their surfaces remarkably dry; adhesions of the duramater to the cranium; the pia-mater, thickened and discolored; the tubercula quadrigemini softened, and concretions of an osseous or stony consistence in the cerebellum. The researches of M. Esquirol and Georget bring to light, analagous appearances and, in about the same proportion of cases—the former finding two examples of acute maniacal disease that exhibited clearly marked evidences of intense inflammatory action, while Haslam's seem to point less equivocally, to highly excited vascular action, if not to inflammation, as the essential pathological condition. The investigations of M. Foville, which seem to have been executed with singular care and regard to accuracy, can scarcely be said to differ from the foregoing, as to essential results; and, though important contributions to science, add but little to the real knowledge, previously extant. Now, while it is to be conceded that many of the manifestations, which pathological anatomy has revealed, indicate inflammation, in ordinary insanity, and especially, in some of the more acute examples, or a grade of vascular excitement, that approximates it so nearly, that, by continuance, it may be regarded as responsible for them, it must be confessed that in no inconsiderable proportion of cases, no clearly defined divergencies from normal structure have been discovered. On the whole, then, we conclude that encroscopical researches, in regard to insanity, in its ordinary forms, reveal no uniform and unequivocal appearances or conditions, either of the brain or nervous system, to which its phenomena can, in strictness of construction, be attributed.

Says Barlow: "Acute mania is another form of purely nervine disease, in which the affection of the brain, appears mainly by its functional derangement; structural lesions, when they do occur, being in most instances, to be regarded in the light of effects, rather than causes." With regard to true, idiopathic puerperal insanity, the developments, after death point to a paucity of blood in the substance of the brain and its meninges, with occasional slight effusions of serum between its membranes and in the ventricles. A learned writer observes, "there are no signs of inflamation or even of congestion,excepting in such cases as have approached, in their character, to phrenitis on the one hand, or to nervous fever on the other, and in these, appearances of an inflamatory or congestive nature, with or without effusions of serum, "are often observed." The same author further remarks, "the morbid condition, more immediately occasioning the malady seems to consist of increased nervous susceptibility and greatly impaired power and frequently associated with deficiency of blood. The balance of the circulation is often disturbed, and, irregular determinations of it take place, especially to the brain and to the uterus. While the circulation is more active in one quarter, it is deficient in others and the functions of the brain, are thus, directly, or sympathetically disordered."

Summarily, it may be averred, then, that in purely idiopathic cases, necroscopical observations exhibit "little besides anæmia of the brain and its membranes and the system generally," and further, that "morbid changes in other parts of the body or even in the sexual organs, are coincidences or accidents, only." Burrows observes: "I see no reason why a state of irritation or morbid action of the brain, distinct from inflammation should not obtain and produce disorder of the intellectual faculties as well as the more violent action of inflammation." But if from the foregoing considerations, we are justified in concluding the disease to originate in morbid nervous excitement, it seems plausible, at least, to deduce the same conclusion from the principles and modes of treatment, now and for a long time past, universally approved and adopted.

Doubtless, there are varieties of inflammation, in the treat-

ment of which, depletory measures and especially evacuants, as by the lancet and drastic purgatives, are inappropriate, if not absolutely injurious.

Whatever the pathology or the conceptions of the practitioner in reference thereto, theoretically we believe it will be found that all authors of the present day and most who have written on this disease, within the past half century, repudiate direct depletion, in idiopathic puerperal insanity. Dr. Tweedie observes, "blood-letting, as a general remedy for puerperal madness, is condemned by all practical writers on whose judgment much reliance ought to be placed." Esquirol and Burrows hold nearly the same language,and Dr. Gooch, whose teachings may be regarded as the most reliable guide to the practitioner says, "The result of my experience is that, in puerperal mania and melancholy and also, in those cases, which more resemble delirium tremens, bloodletting is not only seldom or never necessary, but generally, almost always pernicious." The teachings of Copland, Ramsbotham and others, quite too numerous to mention, are not less emphatic on this point.

Another eminent practitioner holds the following language, in reference to the principles, which should guide the practitioner in the treatment of this disease. "If we consider that the greatest danger to be apprehended, for patients, laboring under puerperal madness, arises from a state of extreme exhaustion that many women die from this cause within a short interval from the commencement of the disease, and that if they survive this period, the healthy state of the mind is in most instances restored, it will be evident that our chief endeavors must be directed to the present support of life. If we can maintain and restore the general health, and keep the natural functions in a state compatible with continued existence, for a time, the disease of the animal system, will, in all probability subside.

Antiphlogistic, and particularly evacuant remedies must therefore be used very sparingly and with great caution." Such, in outline, are the accepted doctrines, in reference to the therapia of the disease and certainly, we find nothing in them, that savors of a conviction, that inflammation constitutes the essential pathological condition. That there may be cases in which

inflammation of some important structure or viscous, gives rise to the intellectual phenomena, by which puerperal insanity is characterized, we take it but few will question. Esquirol, we have already shown, found two unequivocal examples. That such inflammation will differ greatly, in most instances, from acute, entonic phlogosis seems highly probable, and more especially when the condition of the economy on which it supervenes is considered. Nor will it be doubted that the general predisposing causes, not less than the exciting, will modify the condition of the constitution, as regards diathesis, and therefore, give rise to modifications in the grade of action, by which the malady is characterized. The state of the system, too, in reference to plethora and the more or less normal condition of the circulating medium,as also the predominant character of prevalent diseases, in other words, endemic and epidemic influences, all will have their full share in fixing upon the vital movements of the system, an atonic or entonic grade of action. How necessary, then that the medical adviser, do not allow himself to be guided in his reasonings, by arbitrary dicta, nor in his theratpeutical measures, by blind absolute and, quite too often, unintelligent dogmas, but on the contrary that he study each case, that may present in its own intrinsic qualities, aided by the lights, not of *his* experience, merely but by those that emanate from the researches of past and contemporaneous investigators, seems puite unnecesary to argue.

ARTICLE IV.—The Mode of Making Minute Injections of Man and Animals,—described by HENRY GOADBY, M. D., F. L. S., &c.

The subject of minute injection has become of great importance at the present day, the ultimate structure of tissues being deemed greatly superior to the claims of gross anatomy. The improvement in the several forms of microscopes of modern construction, especially in relation to the production of object glasses of sufficiently low power (1 inch, 1½ inch, 2 inches) has greatly contributed to this end.

Ruysch, the celebrated anatomist, first achieved renown for the surpassing excellence of his minute injections of the human subject; he never divulged the secret on which success depended; even on his death-bed, when exhorted that mankind might be greatly benefitted by the revelation of that process which he could never again by any possibility employ, he yet *steadfastly refused to divulge it.* Hereafter we shall find that his *secret* has *been discovered*, and the reason will then be obvious enough why he so steadily refused to confess it.

Lewenhoeok, Malpighi, and Leiberkuhn, all acquired fame for the great excellence of their minute injections: we have been fortunate enough to have seen, and microscopically examined the injections of the first and last of these great authorities. Still, as regards uniformity of success, to an extent hitherto unprecedented, these men, and all others are imperfect compared with Ruysch! They all used the same material, viz. size, colored with vermilion, and of this we shall firstly speak.

This color was preferred, doubtless, because it simulated the color of arterial blood; the difficulty is, however, to obtain it of *good quality.* For many years the Chinese vermilion was esteemed the best in the market, and was in great request for this especial purpose; but in time it loses its color, and turns black, thereby rendering worthless, excellent and even valuable injections. To this hour we possess injections of extraordinary beauty originally, which are totally spoilt in consequence of the change to which they have been subject in this respect, the vermilion with which they were injected being, unfortunately *Chinese.* For the last 20 years the best and most permanent color for this purpose, is manufactured by Brandram, Brothers, Size Lane, London, England.

They make two shades of color: the one *light* for sealing-wax makers; the other, a darker color, with a rich carmine tint, admirably adapted to the requirement of the preparation maker—the color being beautiful and permanent. The price of each is $1 50 a pound.

In England, especially in London, it is easy to obtain any quantity of size, of the required strength, which is an article of great consumption, being chiefly employed for white-wash, and

for coloring in distemper. Parchment size, of beautiful quality, is also obtainable, this being an article of great consumption with water-gilders. In this country, on the contrary, those who want size must make it for themselves. For this purpose, obtain parchment and cut it into pieces; put it into a clean sauce-pan, cover it with water, and *stew it gradually*, never allowing it to boil, which would corrugate the parchment and stop the process, the object being to *dissolve it into a fine, clear, transparent jelly.* This being accomplished, strain it through a fine hair sieve, or a muslin bag, and it is fit for use. Should it be too thick, thin it with warm water to the consistance of Calf's foot jelly.

To a pint of size, *rather less than* 2 *oz.* of vermilion should be used. It must be intimately and well mixed by stirring it with a rod; this process must be repeated preparatory to obtaining a syringeful, allowing it to rest a little for the subsidence of the majority of the particles, *and drawing the charge from the upper stratum.*

It must be kept at a moderate temperature during the time it is in use—from 60 to 90°, *but not exceeding the latter.*

Other coloring materials are sometimes employed with size; flake white, King's, or chrome yellow, and smalt. When the latter is used, it must be lightest in color, of this particular blue, or it will be too dark, and present a bad appearance. All these colors, being light, a larger quantity per pint will be required.

Some years ago, we published an account of a new form of injection in the London *Lancet*, and proceed to transcribe it:

An Account of a Chemico-Gelatinous Injection, with the method of employing it in Anatomical Preparations.

At the latter part of the year 1841, I was desirous of making a series of minutely-injected preparations to illustrate the peculiar arrangement of the capillary vessels in the difierent tissues of the human subject. My experience of the materials usually employed for this purpose—i. e., common size, or parchment size, colored with vermilion, left but one impression on my mind —viz., that the particles of the finest vermilion are too coarse to pass through the capillary system. Occasional *patches* of tissue

are met with, *beautifully injected*, while all around is a mass of extravasation, and this remark applies especially to *fœtal* subjects.

Prior to the above date, M. Gruby published an account in the *Comptes Rendus* of some very successful injections which he had made by employing certain fluids, which he used separately, and which, when they met, mutually decomposed each other, and deposited the coloring matter in the vessels themselves.

He used saturated solutions of the chromate or bichromate of potash, and of the acetate of lead: he directed that equal quantities of these fluids should be used, first injecting all the chromate of potash, to the extent of one-half the quantity of injection supposed to be necessary into the vessels, and subsequently the same quantity of the acetate of lead.

As soon as these fluids meet, they decompose each other; the acetic acid of the acetate of lead combining with the potash to form the acetate of potash, which is set free, and the chromic acid of the chromate of potash combining with the lead to form the beautiful chromate of lead, which is deposited in the vessels.

The reports which had reached me were highly confirmatory of M. Gruby's success with these fluids, and having seen Mr. Bowman's preparations of the kidney injected on this principle, and with the like materials, I determined to employ them. My experiments, however, were most unsatifactory, for, having injected a terrier puppy, a dissection of several hours was required to ascertain whether I had succeeded in injecting any part or not, and my best reward consisted in a patch of capillaries, slightly painted of a pale yellow color, and entirely wanting in that roundness and fullness characteristic of a good injection.

I next procured a human fœtus, and injected it, with precisely the same results.

On making inquiry of Mr. Bowman, touching the ordinary success which had attended his experiments, and the experiments of others, so far as he knew, he told me that I appeared to have met with fair average results, for that the labor of dissecting, consequent on using these fluids, was always great, and that the operator must consider himself well rewarded for two or three days' work, by finding a microscopic bit well injected.

From this narration of failures, it will be evident that the fluids *rarely meet* in the vessels, otherwise the color would be necessarily precipitated. With a view to see exactly what took place, I determined to inject a piece of intestine, in which the whole process would be under my inspection. I placed pipes in the mesenteric veins, and secured all the cut vessels in the usual manner; I then proceeded to throw in the chromate of potash, and found that the potash would not wait for the lead, but came out instantly through the parieties of the vessels as fast as it went in, and in one broad stream covered the table. I repeated this experiment a number of times, but with the same uniform result; on some occasions I threw in the lead also, and as the vessels were moist with the chromate, the slight painting I have mentioned took place; but as only equal quantities of the two fluids produce the best color, the excess of the lead was useless.

Having observed, at this stage of my experiments, that the precipitated chromate of lead is remarkably fine and soft, I determined to use it in lieu of vermilion with size; and although the success was far greater than when I used the fluids separately, the results were in no way superior to the old red injection.

The principle involved in M. Gruby's use of these fluids: that, namely, of forming the color *within the vessels themselves*, appeared to be undeniably good, notwithstanding it had so signally failed in my hands, and, as far as I could learn, in the hands of all those persons who had hitherto employed it; and I had no doubt that if I could succeed in giving some consistence to the fluids, the results might prove satisfactory. For this purpose, size would not do, as it is rarely, when bought, much too strong for use, and it would not bear further dilution. I therefore procured the highly concentrated preparation employed by pastry cooks, and sold by grocers, under the name of gelatine. The following is my formula for the double injection with this material:—

Sat. solution of bi-chromate of potash, eight fluid ounces; water, eight ounces; gelatine, two ounces.

Sat. solution of acetate of lead, eight fluid ounces; water, eight ounces; gelatine, two ounces.

Thus, gelatine, two ounces, are dissolved in sixteen ounces of fluid, and kept and used separately as before; but the success consequent on the addition of the gelatine was quite extraordinary; the vessels were all full and round, and there was no extravasation; and for reasons hereafter to be explained, the microscope revealed scenes so rich in depth, color, and beauty, as to exceed the best red injections I have ever seen.

With this form of injection I have never failed; I have injected three fœtal subjects so minutely, that the capillaries of the skin, and of every tissue, were perfectly injected. Amongst the best specimens I obtained, I may mention injections of the papillæ of the lips, gums, and tongue; of the pulps and capsules of the teeth; of the conjunctivæ and other tissues of the eye; of the mucous membrane of the nose and cellular tissue; fascia; periosteum, &c.; ceruminous glands, lymphatic glands, and thyroid glands; pericardium, auricles of the heart, vasa vasorum. particularly of the aorta and vena cava, and the vessels of all the nerve sheaths. In fine, one fœtus occupied me dissecting ten hours a day for two months, and was scarcely half finished at the expiration of the time.

Having described the success attending the use of these injecting fluids, I must now say how they are to be mixed and used, as everything depends on care in these respects.

Each parcel of gelatine must be dissolved in the water, only, (eight ounces) and in a separate water-bath. The water-baths I employ consist of two earthen pans, such as are applied to a child's chair, and capable of containing about one quart each; these are fitted to two tin kettles, the broad flange of the earthen pan resting on the rim of the kettle, the pan covered with a common saucepan lid. The kettles should be furnished with a bail of iron wire, like that of a glue-pot, or pitch-kettle.

The gelatine is to be slowly dissolved in the eight ounces of water; when this is accomplished, the eight fluid ounces of bichromate are to be added to the gelatine in one pan, and the eight fluid ounces of acetate of lead to the gelatine in the other; each should be well mixed by stirring with a glass rod, a separ-

ate rod being used for each solution, lest the chromate of lead should be precipitated.

The fluids thus prepared, must then be strained through fine flannel (using a piece for each fluid) into other vessels, the earthen pans cleaned, and the fluids returned to them. The injections are now ready for use, and must be kept at a temperature of about 90° by the warm water contained in the kettles.

Directions for Using the Injection.—The best subject to inject is a fœtus, as there are no cut vessels by which the injection can escape. A pipe, with a stop-cock attached, should be firmly tied in the umbilical vein, leaving the arteries open until the yellow injection makes its appearance, when they should be secured. It is most essential that, for this injection, the subject be warmed through by immersion in warm water, the temperature of which must not be higher than 90°, or corrugation of the vessels will take place; it will require from one hour to two hours to accomplish this, and the temperature must be maintained until the injection is completed. The whole sixteen ounces of the potash preparation of gelatine must now be used, care being taken that it never exceed 90°. Some manipulators deem care of little import in the early stage of injecting, and throw in the first few syringefuls rapidly, and only exhibit caution when the subject begins to fill. In my experience, this is an error; and he who would succeed must be equally careful and patient throughout. It is my practice to let the piston descend so slowly, that it can scarcely be seen to move.

Having used the whole of the first preparation, the acetate of lead must be used, when the color will instantly be formed, and give the operator some idea of his progress.

The temperature of the subject must be kept up, and a fresh batch of injection made and strained as before. In about half an hour the injection may be resumed, and the bi-chromate again claims precedence; but only half the quantity need be used now, followed by an equal quantity of the lead. At this point the stop-cock should be turned, and the subject again allowed to rest for half an hour; the remainder of the injections may then be used, and after this, in all probability, the subject will require another batch. The manipulator who employs for

the first time, as much injection for a fœtus as I have already directed to be used, and who experiences the great resistance opposed to the transmission of the last several syringefuls, especially as the body will by this time be swollen and tense to an amazing degree, will feel somewhat surprised to learn, that if he suspend the operation for an hour, keeping up the temperature in the meanwhile, he will be able to throw into the subject twenty or thirty ounces more with comparative ease, and have the pleasure of seeing many isolated congeries of vessels ot the skin gradually approaching each other, and finally anastomosing most perfectly, while the tension of the body will be so great, that if the piston be pressed completely down, and the hand withdrawn, it will gradually rise, and the same may, with care, be repeated several times without causing extravasation.

Towards the conclusion of the process, the injections should be thrown in alternately; and this should be continued, notwithstanding the prodigious distortion of the body, as long as the injection is felt to flow in the vessels. To inject a fœtus well, on this plan, will occupy from four to five hours. The operation finished, the body should be thrown into cold water, and should not be dissected until the next day.

The Dissection will soon reveal what has become of the injection, and is altogether a disagreeable and difficult task. It will be found that nearly all the gelatine and acetate of potash have transuded and separated the tissues widely from each other, and that the blood has been diluted, and intimately mixed with the gelatine, which is colored by it.

The majority of preparations thus injected, require to be dried, and mounted in Canada balsam. Each preparation, when placed on a slip of glass, will necessarily possess more or less of the colored infiltrated gelatine, which, when dry, forms, together with the different shades of the chromate of lead, beautiful objects, possessing depth and richness of color. The gelatine also separates and defines the different layers of vessels. By this injection the arteries are always readily distinguishable by the purity and brightness of the chromate of lead within them, while the veins are detected by the altered color imparted by the blood.

Those preparations which require to be kept wet, can be preserved perfectly in the B fluid, specific gravity 1,100; the A fluid destroys them. I regret much that a gentleman, (now deceased,) Alexander Nasmyth, Esq., for whom I prepared a great number of such injections, had no faith in my preserving fluids at that time, and employed a chemist to prepare a fluid for the preservation of these yellow injections, which has quite destroyed some of the most beautiful preparations I have ever seen, while some of the fellow parts in my possession are as perfect now as they were fourteen years ago.

I would recommend that the slips of glass employed for the dry preparations be instantly incribed with the name of the preparation, written with a diamond, for, when dry, it is very difficult to recognize one preparation from another, until the operator's eye be educated to the effects of this chemico-gelatinous injection. Where so much wet abounds, gummed paper is apt to come off.

When dry, it is sufficient for the purpose of brief examination by the microscope to wet the surface of a preparation with clean oil of turpentine; immediately after examination, it should be put away carefully in a box, to keep it from the dust, until it can be mounted in Canada balsam.

The bi-chromate of potash is greatly superior in color to the chromate, which yields too pale a yellow; and subsequent experience has convinced me that the acetate of potash frequently effects its liberation by destruction of the capillaries, and this, even long after the preparations have been mounted in Canada balsam; perhaps this may be owing to some chemical action of the acetate of potash upon them.*

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* We had an idea that it would be better to substitute the *nitrate* for the *acetate* of lead, especially as the liberated nitrate of potash possesses conservative properties.

We made this experiment in Philadelphia, and obtained the entire alimentary canal of a child about 14 years of age more perfectly injected than any thing we had ever seen; but alas! we found too late that the nitrate of potash had an overweening affection for water, and the entire color was dissolved out in less than a week! It was a total failure!

To be continued.

SPIRIT OF THE MEDICAL PRESS.

Typhoid Fever in North-Western Virginia. By JAMES E. REEVES, M. D., Phillippi, Barbour Co., Va.

DR. HUNT: As typhoid fever has become very common in this part of Virginia, I have concluded to present to the readers of your Journal, an account of the disease as it occurs in this region, deduced from an analysis of 110 consecutive cases in my practice during the five years ending January, 1856. In presenting the following communication, I offer as an apology the importance of country reports of any given disease, when truthfully made, in order that their results may be compared with city and hospital records, thereby affording the profession valuable data for determining its correct nature and treatment.

Typhoid fever, in this region of country, has completely supplanted the bilious remittent form of by-gone years. So frequently has typhoid fever scourged this part of Virginia during the past ten or twelve years, that even now, when it is much better understood, the *name* in some families is but the recollection of the days of death and mourning.

I propose a division of the symptomatology of typhoid fever, as regards the gravity of the disease, into three distinct forms:

1*st*. *The Simple, or Mild.*
2*d*. " *Intermediate.*
3*d*. " *Malignant*, including the Fatal.

This arrangement, I think, will be found preferable to any which our authorities supply. The duration of each of these forms is various. There is no other acute disease in which the period of convalescense is more uncertain. The duration of the *mild form* may not exceed nine days, or it may be protracted to twenty-five days; in this event, neither the patient nor his physician observing any material change after the first ten or twelve days, except that there has been a gradual decrease of bodily strength; or the case thus mild for several days, may pass into the *intermediate form*, and yet not run a longer course, before the more aggravated symptoms pass off; or after having completed a longer or shorter measure of the symptoms of this form, may still take on the severer class of symptoms belonging to the *malignant* and yet the duration of this case may not exceed the limits of one of the *mild form*. But it is proper to remark, that the *malignant* form of typhoid fever, as I shall speak of it, is not always the consequence of the existence first, of the milder forms. In some instances, the disease is essentially malignant in the beginning; and in these, also, the duration is alike various. But these differences of duration will be alluded to again; I enter now upon a description of the symptoms of typhoid fever, and FIRST, THE PRODROMATA.

The accession of this disease is quite different in different cases; some come on suddenly, without any premonitions. In others the period of incubation is extended from two to six days: the patient complaining the meanwhile of sensations of mental and bodily languor; inability to perform his accustomed exercise; a dull, heavy pain in the head, back, and limbs, with a degree of bodily soreness almost amounting to positive pain. At the same time he experiences feelings of chilliness alternating with heat; appetite greatly impaired, with occasional nausea, some unnatural thirst, with a dry insipid state of the mouth; the pulse grows quick, usually 90 to 95 per minute; the countenance expresses indifference; his sleep is interrupted on account of an evening exacerbation of febrile excitement, and the morning arrives, bringing with it no marked alleviation of the symptoms. In some instances, however, there seems to be a morning remission of all the troublesome feelings, and sometimes free sweating occurs. Again, I have seen this relaxation of symptoms occur only on alternate mornings, which may continue for several days after the disease is fully formed, though not so distinctly marked as during the formative stage. There may be, at the same time, a moderate looseness, or a costive state of the bowels, with now and then a few wandering pains in this region, with a sense of fullness of the stomach: the latter attracting the particular notice of the patient, and he wonders why it is so, adding that "for two or three days I have not been able to eat anything." Hour after hour these ill-feelings grow more distressing, when at last a sensation of chilliness more severe and prolonged is experienced, with an aggravation of the headache, backache, &c. The patient is now gladly induced to take his bed, although a few hours before he manfully protested against the idea of a *thirty days' bed*, flattering himself that his feelings of *mal aise* were only those resulting from the effects of a severe cold, too trifling *to demand medical aid*, and that they would pass off of themselves.

Such is the outline of the formative stage of typhoid fever in the maximum number of cases. In the minimum number, this regular succession of prodromata is not observed: headache, backache, chills, nausea, and vomiting, with a rapid prostration of physical strength, seem to be the *instant* accompaniments of this mode of attack.

The mode of access in the 110 cases alluded to, in which I endeavored to ascertain this point, was as follows:

Males.

Access sudden in	16 cases.
2 days formative stage in	7 "
3 " " " "	21 "
4 " " " "	9 "
5 " " " "	3 "
6 " " " "	1 "
	57 cases.

Females.

Access sudden in	20 cases.
2 days formative stage in	11 "
3 " " " "	15 "
4 " " " "	5 "
5 " " " "	2 "
6 " " " "	0 "
	53 cases.

It will be perceived that in those cases in which the access was sudden,

and those in which the formative stage was lengthened to two days, a slight preponderance is exhibited in favor of females; but those in which it was protracted to three, four, five or six days, form a majority in favor of males.

The symptoms peculiar to the *simple or mild form of typhoid fever* in these, were as follows: A marked increase of severity of the former symptoms; the pulse has become more frequent—say 95 to 100; increased heat of skin; urgent thirst, the patient calling for water every ten or fifteen minutes; violent headache, and throbbing of the temples; face flushed and apparently swolen; tongue covered with a white or yellowish fur, occasionally dotted with an *apthous* exudation; urine diminished in quantity and highly colored; wandering pains in the stomach and bowels; nausea, and occasionally free vomiting; entire disgust for food; bowels inclined to looseness, slightly tympanitic, and a gurgling noise and tenderness on pressure over the cœcal region. *This gurgling noise I have found to be a constant accompaniment of typhoid fever.* The patient passes restless nights; his sleep is disturbed, and even rendered painful by frightful dreams—frequently crying aloud, as if really an actor in some horrible tragedy. During his dozing moments through the day, painful impressions trouble his mind. A common impression is, that his body is severed in pieces, one portion at one side of the bed, another at the other, which he anxiously attempts to reunite, and at the point when he is about to succeed in his imaginary undertaking, some other accident befalls him, when he suddenly awakes to communicate the torture of mind he has undergone.

Toward the fifth day the headache generally passess off, but in its stead increased obtuseness or drowsiness of manner is observed. During the progress of an ordinary case, the bowels are moved two or three times a day, the stools in appearance and consistence "resemble new cider;" there is a daily exacerbation of fever, most generally toward evening, sometimes twice a day, during which, red spots about the size of a half dollar occasionally appear, first upon one cheek and then on the other, rarely upon both at the same time; or in the absence of the spot on the cheek, the *nose* may become red and shining, giving to the patient rather an unusual appearance; there may be also occasional epistaxis, though seldom profuse; the tongue, after the first four or five days, begins to look red around the tip and edges, sometimes it will part with its fur first in patches—one side clean and of a bright red—while the other half is covered with a thin white fur; it may be moist, or inclined to dryness, and somewhat trembling when protruded. During the entire advance of the case, connected with the above symptoms, will be observed more or less cough, usually slight, and towards the close of the disease tolerably free expectoration. But among the number of symptoms enumerated, no one is so marked and constant as debility; and the degree in which it exists at any period, cannot be correctly estimated by the patient unless when he attempts to set up out of bed: *a soft couch and cool water* he would not exchange for any other luxury.

But to complete the description of this form of the disease, I mention another accompaniment: the *rose-colored* spots, the regular appearance of which I have seldom failed to observe at some period of the disease. I cannot say this much of the transparent vesicular eruption called *sudamina*, never having noticed it but in a few cases, all of which occurred in the severer form designated as the intermediate.

I have thus attempted to describe the symptoms, with their modifications, peculiar to the *mild* form of typhoid fever, all, or a majority of which, enter into the composition of every case of the disease.

The duration of this form, like each of the others, is quite uncertain; yet the amelioration or aggravation of certain symptoms at certain times, either

point to approaching convalescence or portend the conversion of this form into one of greater severity. When the case is about to terminate in convalescence from this form, the febrile exacerbations becomes less marked, and of shorter duration; the pulse becomes soft and less frequent; the tongue loses its coating; the discharges from the bowels become more consistent; thirst diminished; the features shrink, the countenance brightens, and the appetite returns.

Of these 110 cases 57 were of the *mild* form of the disease, the duration of which was as follows:

Males.

In 1	case	the	duration	was	9 days.
" 2	"	"	"	10	"
" 1	"	"	"	12	"
" 3	"	"	"	13	"
" 6	"	"	"	14	"
" 5	"	"	"	15	"
" 1	"	"	"	15	"
" 6	"	"	"	17	"
" 4	"	"	"	18	"
29					

Females.

In 1	case	the	duration	was	9 days.
" 1	"	"	"	10	"
" 3	"	"	"	12	"
" 1	"	"	"	13	"
" 4	"	"	"	14	"
" 9	"	"	"	15	"
" 5	"	"	"	17	"
" 2	"	"	"	18	"
" 1	"	"	"	23	"
" 1	"	"	"	25	"
28					

From the above it will be seen that a majority of the cases of this form terminated between the thirteenth and eighteenth days, reckoning from the time the patients first took to their beds. But it should be remembered, however, that the date at which the patient takes his bed will not always be the precise date of the full development of the disease, but it is generally the case. I have seen one or two patients suffering from the mild form of the disease, who did not take to their beds for more than an hour or two at a time during the day, throughout the entire course of the disease, but wandered about the streets the object of remark.

But instead of the amelioration of symptoms above mentioned, as marking convalescence from the *mild form*, the case becomes exasperated; we have another distinct and more formidable phase of the disease to contend with.

The Intermediate Form. The most prominent changes that are to be observed in this form are these:

The febrile exacerbations become more prolonged, and their messions subsiding less frequently with perspiration; the pulse becomes gradually weaker, and more frequent, say 110, 15, 20, or 30 to the minute ; the tongue previously moist, now inclines to dryness, and takes on a thicker coating. As the case advances the condition of the tongue becomes peculiar, its edges are thin and red, and apparently contracted, its surface concave, taking more the form of the bowl of a spoon with its point somewhat rounded and slightly cracked, than of of a tongue. Frequently there will be a dark brown stripe- from a half to three-fourths of an inch in width, running down the middle of the tongue as far back as can be seen, and when protruded it trembles, telling us how much strength *yet* remains. There is, also, at the same time, an accumulation of *sordes* on the lips, gums and teeth; twitching of the tendons; increased somnolency; duskiness of the countenance; and greater confusion of mind. The patient does not call so often for cool drinks; he seems insensible, in a great measure, to his wants. If there is a desire to go to stool, he does not make it known to his attendants until just at the minute he feels that the discharge must take place, and he will suffer his bladder to become enormously distended, sometimes, without an effort, or even a desire te empty it. Partial deafness is quite a common attendant upon this form of disease. In one instance, my patient being a female, I had to speak at the top of my voice to be heard. Wandering of the mind, more or less, is most always present. At first the mind of the patient wanders in the night only, but as the case advances, this confusion occurs during the day, and sometimes very strange impressions trouble the mind. It is quite a common thing for patients suffering from this form of the disease, to imagine the foot posts of the bed converted into uncomely personages, placed there to make all sorts of grimaces, and they will frequently start up in anger to drive them from the room, the effect of which dispels the allusion, and they return to their quiet pillow wondering at themselves.

Coincident with the above, there are other and significant symptoms having peculiar reference to the state of the bowels. Upon an examination of the abdomen, a marked increase of tympanitic distension will be observed. Diarrhœa is more or less present, always proportioning the amount of meteorism to the frequency of the discharges. It is sometimes slight, causing not more than two or three stools in a day, and at others, as many as ten or twelve in as many hours. The dejections, for the most part, are darker and more offensive than in the *mild* form of the disease, and are frequently attended with very acute pain, most generally referred to the umbilicus.

The urine is deeply colored, voided in less quantities, and occasionally with much difficulty. When there is a disposition on the part of the patient to empty the bladder, he cannot always succeed in his effort, and unless relieved by the catheter much suffering is the consequence. It is in the region of the bowels that the *rose-colored* spots generally first make their appearance. Sometimes they are but few in number, and at others spreading over the entire breast and shoulders. I have found this erruption to a greater or less degree in every case where I have searched for it.

Sudamina, as before said, I have not so often observed; but whenever found was always in this *form* of the disease preceded for a day or two at intervals by free perspiration.

Epistaxis, when it occurred, was always more profuse than in the milder form. In two cases the loss of blood in this wise was quite unusual, being not less than twelve to twenty four ounces. Both of these patients recovered.

Now, this form of typhoid fever, as above described, may go on undetermined for a short or longer time, flattering us at one time with an approach of a speedy convalescence, at another, exciting our fears. It is not

at all uncommon for us to see the togue clean off, become moist, the countenance brighten, diarrhœa and tympanitis diminish, and the skin become moist, when, without the slightest apparent cause, there is a sudden aggravation of all the symptoms: the tongue, just rid of its coating, becomes dry, red, cracked and bleeding; fresh sordes accumulate on the lips and teeth; frequent desire to stool: at one time a free passage, dark and offensive, at another small, with a corresponding increase of tymanitis and abdominal tenderness; the pulse more frequent, and less resisting; previous duskiness of the countenance, and wandering of the mind, twitching of the tendons, skin hot and dry. This mutation of symptoms may last but a day or two, and the patient recover without necessarily taking on the graver symptoms reserved as peculiar to the malignant form. When the case is to convalesce from this aggravation of symptoms just named, as rapidly subsides: the tongue coats over again with a thin white fur, and the state of the pulse, the bowels, and the mind, become as favorable as before; and the symptoms continue to improve, until convalescence is completed.

The duration of the *Intermediate* form, like its kindred, is not always the same. But to be understood: I said in an early part of this paper, that a case of this form—the intermediate—may not run a longer course than one in which the disease was mild thoughout, (*i. e.*) a case mild in its character at first, may, after the lapse of several days, become aggravated, and present the severer class of symptoms just described, and end in convalescence as soon as one that did not partake of this increase of symptoms. Therefore, in speaking of the duration of the *Intermediate* form, it will be remembered that I include the whole time, from the date of the first development of the fever to the establishment of convalescence. I regret now that I did not note the precise dates when the mild was converted into the intermediate, and the intermediate into the malignant form. If this had been done I could have appropriated to each phase of the disease its exact duration. Reckoning, therefore, as above proposed, the duration of twenty-five cases passing into this form was as follows:

Males.

Duration of	2	cases	was	16	days.
"	3	"	"	18	"
"	3	"	"	20	"
"	3	"	"	23	"
"	2	"	"	25	"
"	0	"	"	0	"
"	0	"	"	0	"
	13				

Females.

Duration of	1	case	was	17	days.
"	4	"	"	18	"
"	2	"	"	20	"
"	1	"	"	23	"
"	1	"	"	25	"
"	2	"	"	28	"
"	1	"	"	35	"
	12				

I now proceed to complete the description of the symptomatology of typhoid fever:

The Malignant form. I have already said that typhoid fever may be stamped with malignancy from the beginning, without having necessarily to pass though the milder gradations. This is not generally the case. The majority of cases of this form is preceded, for a longer or shorter period, by each of the simpler forms. To describe the symptoms of this form I shall go back to the point from which I left off, as completing the symptoms of the intermediate form, and endeavor to present a continuous picture of the disease, from the mildest to the most severe form, and then proceed to notice the rapid succession of symptoms that occasionally occur, marking the malignant form in the beginning.

As already stated, it is not uncommon, after a seeming amelioration of all the symptoms, for sudden and alarming changes to occur, exposing the patient to the dangers of a still severer form, the most remarkable symptom of which was, the drying of the tongue after having become clean and moist. When the disease is to be protracted into a graver form, it is generally at this juncture that it becomes apparent; and the case thus aggravated, rapidly proceeds to a final termination, either in recovery or death. Prominent, then, amid this increase of number and severity of symptoms making up the *malignant* form, will be a greater prostration of strength. The patient lies constantly upon his back, and inclines to slip down toward the foot of the bed; his deglutition may be interfered with; the voice becomes enfeebled, unable sometimes to speak above a whisper—at others it may be much stronger, but he cannot articulate sufficiently to be understood. The tongue takes on a dark and thicker coating, becomes cracked and bleeding. If the patient is asked to protrude his tongue, he will, perhaps, do so, but the movement is slow, and he will likely leave it exposed, and trembling, if not told to take it in. At the same time fresh sordes will be found to collect upon the lips, gums and teeth. The pulse becomes more frequent and feeble. In some instances it is almost impossible to count it for the constant twitching of the tendons of the wrists—*subsultus tendinum.* A general tremor of the whole body is frequently observed, and in such cases, even the bedstead will communicate a like sensation to the body of one who leans thereon. Cough is more or less present—and this should be attentively watched; the breathing is more hurried than before, and occasionally irregular. The heat of the surface may be uniform, or it may be unequally distributed—one part hot while another is cool, or the face and hands may sweat freely, while the rest of the body is dry and parched. If, at the same time, attention is paid to the state of the bowels, a proportionate degree of disorganization will be found to have taken place there: the tympanitic distention has enormously increased, as to present sometimes "a convex outline from the ensiform cartilage of the pubis," and if pressure is made, the entire abdominal region appears thin, hard and resisting, "as though its walls were made of pasteboard." The stools are more or less frequent, very offensive, and in color and consistence may resemble brown paint, or even *tar*; and the coating these discharges give the pot is not always easily removed. The urinary discharge has also undergone a commensurate degree of alteration. While the quantity of urine voided at a time has become less, its color is that of dark ley, and not unfrequently little particles of coagulated blood are deposited at the bottom; or it may be retained, requiring the repeated use of the catheter. It is in this form of the disease *always* that we observe the most frequent and profuse hæmorrhages to occur. Sometimes the urine is retained and dammed by the firm coagula in the bladder. In one case I had to break up and dilute this coagulum by injections into the blad-

der, of flax seed tea, before the urine could pass out through the catheter; and yet notwithstanding this operation had to be performed regularly for several days, the patient recovered. Indeed I have seen free hæmorrhages take place from the nose, gums and bowels, following each other in regular succession in the same case. But the disease has not necessarily to pass through all, or either of these to arrive at a fatal termination: death may take place without them. Neither does the existence of any one or all of these occurrences insure a fatal termination. They stand as *probabilities* of a fatal termination, but I have seen as many cases recover as die, in which they were present.

Delirium is a common attendant upon this form of the disease. It may be attended with wild and violent agitation, but more frequently is of that species called *low* and *muttering;* the patient picks at the bed clothes, or at imaginary objects in the air; his stools become involuntary, and s sickening odor exhales from his body. Along with these the vitality of the skin becomes so feeble, that gangrenous eschars form on the hips, sacrum and shoulders.

Finally, if after a long and tedious struggle between the efforts of nature to cure, and the powers of disease to kill, nature is about to triumph, the pulse grows less frequent and acquires strength; if there has been delirium or stupor, it gradually subsides; *subsultus tendinum* ceases; the tongue becomes moist and soon parts with its coating; the discharges from the bowels are of a lighter color, and more consistent, and less offensive; there is a more abundant secretion of urine; the surface becomes moist and of uniform temperature; the features shrink; and the appetite returns. But if disease gain the mastery, it may accomplish its purpose of death in different ways. If it is to be by *coma*, the low muttering delirium from which the patient could at first be aroused, gradually becomes more profound; the eye balls are upturned, and roll from side to side; the pulse beats more rapidly, and with gradually decreasing regularity and strength; the respiration grows quicker, and automatic efforts are made to expel the mucous which chokes up the lungs, and begins to rattle in the throat; a cold; clammy perspiration breaks out upon the skin; the extremities become cold, this coldness gradually extending toward the trunk, when at last there is a final stauggle, and death reigns.

Another mode of death we sometimes see, is by *asthenia.* Death occurring in this manner does not take place early. I have never seen it to occur until after the third week, and always preceded by large losses of blood by hæmorrhage, after which, swelling and ulceration of the parotids, petechia, purple spots, and the appearance of large *bullæ*, containing a mixture of blood and water, which soon becomes *pustular*, upon various parts of the body, closed the scene. Yet, notwithstanding this abundant measure of putrescency, I have seen the mind remain unclouded to the very last hour. When perforation of the bowels occurs, there is a sudden supervention of very acute pain in the abdomen—at first circumscribed, but soon spreading over the entire belly. (See fatal case female, age 48.)

Such, now, are the symptoms of a case of typhoid fever, either mild throughout, or after having been mild for a longer or shorter time, passing into the *intermediate* form, and convalescing from this, or entering into one of still greater severity—the *malignant* form.

I will now briefly speak of those cases, occasionally occurring, in which a degree of malignancy is observed in the beginning, or very soon thereafter. Of twenty-five cases of the malignant form, nine presented symptoms of this cast from the beginning: five males and four females. In each of these cases there were strong manifestations of cerebral disorder in the beginning:

aversion to light and sound; watchfulness; confusion of mind, and delirium —the latter occurring during the first two or three days of the disease. During the further advance of these cases, the delirium became continuous, and occasionally violent; the eyes were injected, the countenance of a dusky hue; startings of the tendons; skin intensely hot; bowels a little inclined to be sluggish; the tongue thickly coated, of a dark color, and inclined to dryness; pulse not very firm, but frequent, amounting to 115 or 120; bleeding at the nose, which was sometimes free; the urine diminished, and highly colored. Such are the symptoms usually attending a case thus suddenly attacked, for the first seven or eght days, after which, instead of the previous costiveness of the bowels, a diarrhoœa frequently sets in, with a degree of tympanitis not before observed, and a sudden prostration of strength. To this condition is added a pulse less characterized by strength; heavier sordes accumulate on the lips and teeth; the tongue is very dry, and its coating looks as though it were made of black varnish—for it glistens—and when protruded, trembles very much. The case thus far described, may go on undetermined for several days longer, or even for several weeks. When it is to result fatally, the case takes on early the additional symptoms belonging to death by coma, as already enumerated.

The duration of the nine cases alluded to was was as follows: In 2 cases the duration was 12 days; in 2 cases, 15 days; in 2 cases, 18 days; in 1 case, 21 days; in 1 case, 25 days; in 1 case, 60 days.

Among these were two fatal cases, male and female, age of the former 56 years, of the latter 21 years; the duration of the disease in the male twenty-one days, in the female eighteen days.

Of the 19 remaining cases belonging to the *malignant* form, the duration was as follows: In 1 case, the duration was 12 days; in two cases, 15 days; in 4 cases, 18 days; in 1 case, 21 days; in 1 case, 23 days; in 2 cases, 26 days; in 5 cases 28 days; in 1 case, 30 days; in 2 cases, 31 days. Males, 10; females, 9.

Of the 7 fatal cases occurring among these the duration was:

28 days in 4 cases; three males and 1 female; ages 11, 18, 23, and 48 female.

26 days in 2 cases: males—ages, 19 and 24.

23 days in 1 case: female—age, 19.

Thus making in all 9 fatal cases.

General Remarks.

From the foregoing detail, it will be seen that amid the multitude of symptoms belonging to typhoid fever, those relating to sensorial disorder, stand among the most prominent; that these symptoms vary in degree of severity from mental languor or inability in the beginning to the wildest delirium; and that the subsidence or diminution of these constitute one of the earliest and surest signs of approaching convalescence.

It is worthy of remark, however, that while it is usual for the mind to have regained its entire soundness by the time convalescence is fairly begun, that occasional cases occur in which a morbid condition of the mind remains even after the patient is able to be out of doors. A case of this kind is included among the nine cases spoken of, presenting a severe form of the disease in the beginning. The case was that of a young man, aged 18, of robust form; business that of a clerk in a store, and of an active turn of mind, who, after complaining of the premonitory symptoms of the disease for a day or two, was taken down in the manner above described. Delirium came on early;

and after the first four or five days, was attended with wild and violent agitation, to such a degree as to require the constant attention of his friends to keep him in bed. At the end of twenty-one days, however, the delirium had entirely subsided, and he began to relish a little food; and by the thirty-second day he could be out of doors. From the time the delirium passed off up to this last named date, he had not exhibited the slightest aberration of mind; but, very much to the surprise of his friends, on the next day—the thirty-third—he accused the girl of the house of having stolen his account book, "with a leather back," in which, he said—he had charged several of his friends with large sums of money loaned—money that he had drawn at lottery, amounting in all to $10,000. His mother, who was present at the time, endeavored to convince him that he was wholly mistaken, that he had certainly not been so fortunate as to gain money in that wise, and that he was troubling himself about a matter altogether imaginary. At this he became angry, declaring most solemnly that his whole statement was true; that he had had the money in his own hands, charged the amounts loaned in the aforesaid book—that he was not mistaken, and accused her of having joined in with other of his debtors to defraud him of the whole sum. In a few days, however, he became convinced of his error of mind, and could laugh over it heartily.

Typhoid fever is occasionally complicated with other diseases. I have seen two cases in which it was complicated with pneumonia in the beginning. One case recovered.

In the one fatal case—of twenty three days duration—a female, erysipelas attacked the ear on the evening of the twenty-first day of the disease, which spread rapidly over the head and neck, killing the patient by the twenty-third day.

Pregnancy and lactation, I have not found to have any material influence upon the disease. In the twelve cases of the intermediate form pregnancy existed in three, the advance of which was two months in two, and three months in the remaining one. Neither of these miscarried. Among the nine cases that passed from this form into the maliguant form, pregnancy existed in one case, at an advance of two months. Miscarriage occurred on the tenth day of the disease, and was not followed by any serious result. The patient began to improve by the twenty-first day.

Of those who gave suck, two were of the *mild*, and one of the *malignant* form. The duration of the disease in the former was fifteen days in one, and eighteen days in the other. In the latter, the duration of the disease was thirty days. In neither of the former was the child denied its usual amount at the breast. In the latter case, of the malignant form, during the second week, the secretion of milk was entirely suspended; the child was, in consequence of it, removed to a neighboring family, and not permitted its mother's breast for two months, when an abundant secretion again took place.

Taking into account physiological differences, I have not seen the course of the disease in infancy and childhood materially different from that in adults. In two cases the disease appeared as early as the eighteenth month, (the mothers suffering from the disease at the same time); and from the third year up to the twelfth, there were nineteen cases. Including the two at eighteen months, fourteen were of the mild form, four of the *intermediate*, and three of the malignant. The duration of the disease varied between nine and twenty-eight days In the case of the last named duration (age 11) profuse hæmorrhage from the bowels took place on the twenty-third day, followed by petechia, &c., terminating the life of the boy on the twenty-eighth.

History and Causes.

Typhoid fever was not recognized in this country prior to the year 1837. In October of that year, a gentleman from this neighborhood, who had been on a visit to Athens Co., Ohio, was brought home sick of the disease, called at that time in Ohio, "*slow fever.*" In three or four weeks after his arrival, his mother, father, and three brothers, were taken down with the disease; the mother died. The last of November following, six of another family who was near by, took the disease; one died. In december it appeared in a third family, five of these had the disease, and three died. From these it sprang up in another family, five took the disease, and one died. The last of January, 1838, nine of another family had the disease, and four died. During the following spring and summer, two other families took it, nine of these died. In the winter of 1838, and '39, several other families took the disease, amounting in all to twenty cases; of these six died. From this up to the winter of 1840 and '41, there were occasional cases springing up throughout the country. But during the fall and winter of 1841, the diseased appeared in another neighborhood, ten miles distant; several families were attacked, among which there occurred ten cases; four died. In the fall of 1842, a merchant returned from the north, sick with the disease (his neighborhood alike previously free from the disease); several of his family took it, but none died. The following winter it appeared in another neighborhood, six had the disease, and three died. From this date up to the winter of 1843, there were but few cases occurring, but during the next spring, it made its appearance in still another neighborhood, some ten cases occurred, and four died. During the year 1845, it was generally prevalent in the country; about thirty cases occurred during this year. From the close of the year 1845, up to the year 1851, the disease became less common; but during the spring and summer of this last year, the extent of its visitation exceeded that of any former year; and the citizens of our village, particularly, suffered severely from the disease.*

Philippi is situated about ten miles west of the Laurel Mountain, on the Tygarts Valley River, forty miles from its junction with the Monongahela, which for two miles above, and five miles below us, has a sluggish current. Across the river, immediately opposite Philippi, is a small village, Georgetown. The bank on that side is very low for a few hundred yards, spreading out into a level in extent of about ten acres, and bordered on both sides by high hills. The greater portion of this ground is inundated at every considerable rise in the river. In the spring of 1851, the construction of a bridge connecting Philippi with Georgetown, was commenced; adding about thirty to the population of this last named village. Among these workmen whose business it was to stand in the water, typhoid fever began; from these, it occurred among the workmen in stone upon the banks; and from these to the citizens generally. Our side of the river, Philippi, was next attacked, extending from family to family. Several of the workmen at the bridge, on being taken sick, went to their houses in various parts of the country, forming starting points of the disease there. Other hands were employed to fill the places of those taken sick, but were soon likewise taken down. Fresh workmen were again and again secured; but the disease as successively continued to attack them, until at last, during the year 1852, the work was, in consequence of it, almost completely suspended.

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* I am wholly indebted to my friend, Dr. E. D. Talbott, of Philippi, for the above early history of typhoid fever in this country.

In September of this year, there was a menagerie at Philippi, largely attended by the people of the county; the following night nine persons in attendance during the day, were taken sick with the disease.

From 1851 to 1856, our country has never been entirely free from the disease for more than a month or so at a time. During this period the disease has been wandering about the country, at one time mild, at another very severe, attacking one neighborhood this year, another the next; and then, perhaps, returning to the locality it scourged the year before. The last fall and winter the disease was uniformly severe. The summer was wet throughout; vegetation grew rapid-y, and was abundant. Heavy frosts appeared early, and the offensive exhalation from the decomposition of vegetable matter was remarkable. Hæmorrhage from the bowels was of frequent occurrence at this season.

Within the limits of Barbour county, during the past six years, according to my own observation, and the observation of my medical brethren of the county, there have been not less than 600 cases of typhoid fever. Of these about sixty have died. In Philippi the disease has nearly gone through with the entire population above twelve years of age.

Contagion. What other evidence besides that unavoidably adduced in the foregoing history of the disease in this county, have I to add to prove the contagiousness of typhoid fever? I could bring forward abundant testimony, but I deem this unnecessary; and I shall content myself with the detail of a single instance:

Riley M——, aged 24, a farmer, visited an acquaintance sick of the disease, Oct., 1853, distance some ten miles. There was no fever in his neighborhood at the time; but in two weeks after his visit to this patient, he took the disease at his father's dwelling, and died. In ten or twelve days after his death his sister, two brothers, mother and father took it; the mother died. Among those who visited Mr. M during his illness, was a cousin, a girl of nineteen, and a male friend, both of whom immediately contracted the disease, and the cousin died. From these the disease spread throughout the neighborhood.

The above is but the history of many such cases. The contagious feature of typhoid fever, together with another—the perfect immunity to subsequent attacks,—is well understood by the people at large throughout this country.

Age has some influence on the permission of the disease. Of the 110 cases, upon which this paper is founded, the several ages were as follows:

Males.

1	at 18 months.			
6	from	3	to 6	years.
2	"	6	to 9	"
3	"	9	to 12	"
3	"	12	to 15	"
6	"	15	to 18	"
3	"	18	to 21	"
13	"	21	to 25	"
10	"	25	to 30	"
3	"	30	to 35	"
2	"	35	to 40	"
3	"	40	to 50	"
2	"	50	to 60	"
57				

Females.

1	at 18 months.				
2	from	3	to	6	years.
4	"	6	to	9	"
2	"	9	to	12	"
9	"	12	to	15	"
4	"	15	to	18	"
7	"	18	to	21	"
9	"	21	to	25	"
7	"	25	to	30	"
2	"	30	to	35	"
1	"	35	to	40	"
3	"	40	to	50	"
1	"	50	to	60	"
1	"	60	to	65	"
53					

Season. The autumnal and winter months seem most productive of the disease. The 110 cases occurred as follows:

January, 12; February, 5; March, 7; April, 5; May, 4; June, 9; July, 3; August, 8; September, 9; October, 16; November, 22; December, 10.

To be continued.

EDITORIAL AND MISCELLANY.

"*The Medical World.* A journal of Universal Medical Science."

Such is the title of a new *weekly* paper, published in Boston, edited by J. V. C. Smith, assisted by another Smith. All that we know of the antecedents of J. V. C. Smith is, that he has "been for a long time *intimately associated* with the Boston Medical and Surgical Journal." But how such an *intimacy* could have resulted in giving birth to such an illegitimate offspring as that now before us, is a poser to our ideas of embryology. Charity would lead us to attribute the phenomenon to mental aberation, and kindly suggest that Mr. Smith be removed to an insane asylum.

Our first impressions prompted the hope that our editorial fraternity would resolve at once to pass it by in silence, and that we should never see the name of the hybrid in a respectable medical journal.

But it may be well to make a distinction between the relative position of those men—who, having once occupied a respectable position in the profession, chose, like McClintock, to "sell his birthright for a mess of pottage"—and those who are born and bred in the schools of quackery. Men who have been identified with the respectability and honor of our profession, not only carry with them an influence which serves them as capital, but in their recreancy, they stigmatize and polute the character of the profession just in proportion to the responsibility and influence which they have possessed.

The honor of our profession is to be guarded and vindicated

and though we would rather "have the good will of all than the ill will of any," yet we could not be true to our convictions of duty should we not enter our protest against such a base imposition.

In this periodical a perfect "Pandora's box" is offered to the people and profession—a cauldrou kept hot by the antagonizing elements of all the isms, ics and pathies that have ever been offered to the ignorant and credulous. An advertising sheet for patent nostrums and all that belongs to the catalogue of the montebank. Now, what should be recorded of a man who, from any consideration, has thus disgraced himself and his profession? Simply an appropriate epitaph for the tombstone of his professional character:

"When Satan fell
He sought to drag the hosts
Of heaven down to hell." R.

New Publications Received.

Our thanks are due to Messrs. Blanchard & Lea, through the politeness of Messrs. Raymond & Selleck, of this city, for the following works recently issued from their prolific press, viz: An Introduction to Practical Chemistry, including analysis. By John E. Bawman, F. C. S., etc. The Practical Anatomist, or Students Guide, in the dissecting-room. Ay J. M. Allen, M. D. etc., and Obstetrics, the Science and the Art, by Charles D. Meigs, M. D. etc., third edition, revised, 1856. We have, also, received, from the publishers. The Transactions of the N. Hampshire State Medical Society, and those of the "Illinois State medical Society, for the present year. These, severally, will be more particularly noticed at our earliest convenience.

☞See advertisement of the *fourth* edition of Gunning S. Bedford's Clinical Lecture on the diseases of women and children. First page of advertising sheet.

NEW PUBLICATIONS.

Clinical Lectures on the diseases of women and children. By Gunning S. Bedford, A. M., M. D., Professor of Obstetrics, the diseases of women and children, and clinical midwifery, in the University of New York. Fourth edition. S. S. & W. Wood, publishers.

The treatise before us is the production of a novel, a pioneer movement, in Obstetrical teaching, in our country. When it was first proposed, but few regarded it as a practicable enterprise; and there were those, who not only looked upon it as impracticable, upon grounds which, to them seemed insurmountable, but as seriously objectionable, nay strictly obnoxious, morally. Through the perseverance and cogent reasoning, however, of the learned author and the sustaining efforts and influence of friends who foresaw, or believed they foresaw, in the proposed enterprise, the elements of success, it was finally resolved to make the trial, to subject, to the rigid test of experiment, a measure, which seemed plausible in theory. The "Obstetrical Clinic" has, now, been before the world about six years, and it is believed that not only the Corporation and Medical Faculty of the University of New York, are convinced of its feasibility and importance, as a department of scientific instruction, but also the profession, generally are satisfied that its success, if not complete, has exceeded the most sanguine expectations of its warmest friends. We regard it as convincing evidence, if further evidence were needed, of the great value of *Clinical Instruction*; and, from the first, found it difficult to appreciate the real force of most of the objections, urged against it. That the student of medicine ought to be furnished with the most ample opportunity of familiarizing himself with the profound principles of

his science and with all proper facilities for educating his senses and maturing his judgment, in order to comprehend and interpret the sensible, and as many as possible, of the more recondite and less obvious phases and phenomena of disease, we apprehend, none but such as may have some selfish or ulterior purpose to subserve, will pretend to question. The practitioner who will recur, to the embarrassments and doubts, that hedged his path and often gave rise to indecision or induced him to eschew treatment which might have proved successful and which subsequent experience, (another name for Clinical Instruction,) has rendered him competent to apply with salutary, if not saving efficacy, will not fail to acknowledge the value of every effort to teach his science, in a rational and therefore practical way. The student in his future career will not withhold from it, the mead of praise to which it is justly entitled. If, within the last quarter of a century, obstetrical science has been so far improved as to have materially abridged the mortality, incident to pregnancy and parturition, a fact, plainly shown by numerical investigations, we venture to predict that, consequent upon the improved methods of teaching this responsible branch of the healing art, the next quarter of a century will witness an enlarged ratio of successful practice, an augmented saving of human life. To the clinic of the N. Y. University, and those of kindred institutions, the merit will attach, and the future historian of the art of healing will transmit the names of Bedford and others, who are actuated by like motives and are laboring in the same field, to succeeding generations, as benefactors of mankind. In our humble judgment, too, it is through clinical teaching, that medicine is to approximate, if not, in the onward progress of our race, to become an exact science. What more desirable event! and who that loves his science, and his species but earnestly seeks it? But there is one feature of Dr. B.'s book, which it seems to us, deserves more than a passing notice. It will be found, both in the doctrines it inculcates, and in the practical measures, used for the correction of disease, in the elements and forms of his prescriptions. He does not enter pell-mell, into the scramble and chase after the new, the scarcely more than suggested and unsubstantial. His motto is,

obviously, "hold fast to that which is good," and continue to add, thereto, of whatever else is proven, by the test of time and reliable experience, in therapia as well as doctrine, to be good. Such would seem to be the only mode of procedure that leads to progress, onward and absolutely available. A gothic spirit, a vandalism is abroad in the world, "stalking at noon day," and wantoning in the ever exciting and anxious spirit of the age; in the prurient curiosity, the illegitimate aspirations and desire for "vile lucre" of the superficial, the unstable, and the selfish.

It enters the domain of practical science, nay, most of the departments of human investigation. Not even the sacred precincts of theology are free from it and both the morals and politics of the day are marred and defaced by it. It is denominated progress ; but adopting, and making the hasty and the untried to occupy the place of the approved and the praiseworthy, it savors more of retrograde, than of forward movement. The observing and reflecting cannot fail to have noticed it, and to have felt its disorganizing influence. Instead of promoting, there can be scarcely a doubt that it retards progress. Its abettors seem to forget that there is aught substantial in the present state. They seem not to be aware that the antique edifice, though adorned with all the graces of the most refined architecture, affords, in no degree, a less grateful shelter from the fierce assaults of the elements, and that the towering and umbrageous linden, old and familiar, though it be, furnishes a shade no less agreeable, notwithstanding the modern and fashionable alanthus occupies a place in the same parteere beside it. They forget that *truth* is *truth*, still, though ages have given it their sanction, and that, "*crushed to earth, she will rise again.*" Now, it is not ours, to repudiate the *new*, merely because it is *new;* neither to adhere, imperturably to the *old*, for no other reason than because it is *old.* The latter would be not less ultraism than the former, though commonly known by the cognomen, fogyism. What we desire, especially, to approve in the "Clinical Lectures" is that, while the author has avoided fogyism, on the one hand, he has equally avoided ultraism on the other—while he has escaped collision with

Scylla, he has, with consummate skill, conducted his bark safely on, without foundering in Charybdis. If we rightly understand the text, he accepts, in doctrine or theory, and appropriates, after close and analytical examination of the new, and often startling, whatever may be readily tested and confirmed by actual experiment, or is not incompatible with the known and approved. Likewise, in practice, such measures and remedies as have the sanction of time and the approval of the learned, and such as do not contravene any established doctrine or fact, in pathology, are those, which he makes available in combatting disease. He must be fastidious to serious nausea, who can give issue to the following crude material. "Dr. Bedford's book again.—The Charleston Journal is out with a stereotyped puff of this miserable abortion, under its new name, having dropped its Frenchified title of 'Obstetrical Clinique,' and taken a new one, which has less odor." Certainly, we have no relish for foreign, often nearly idiotic idioms, neither for the disposition, quite too prevalent, to ape foreign sentiments or foreign usages in any way. The condition and the age of our people and country demand a literature, general and professional, as nearly as possible *American-national*, and we hope the day is not far distant when an event so desirable will be realized; when American authors will feel it to be not only evincive of good taste, but of good sense, to exclude from their productions foreign national expressions—the mere frippery of learning, and clothe their ideas and their philosophy in pure and plain, yet copious and flowing Anglo-Saxon. Nevertheless, we would not repudiate an otherwise reputable performance on account of a minor blemish of the kind referred to in the above quotation. Possibly exceptions might be taken to the familiar, colloquial dress in which the work appears; but, for reasons which do not appear, the author prefered to let the work go forth to world in the form and illustrative of the circumcumstances under which it was produced. He remarks, "I was anxious that the lectures should go forth to the profession without concealment as to the circumstances under which they were delivered." Assuredly, it was his to exercise his own judgment in this matter, and yet, we may be permitted to observe, that our

own predilections would have comported better with a little more of connection and methodical arrangement, which, in preparing the work for the press, would seem to have been practicable. On the whole, we regard the fact, that "in the brief period of fifteen months from the day of its first publication, a fourth edition of the Clinical Lectures on the diseases of women and children should be demanded," as "the most positive evidence that" the "labors" of the indefatigable author, " to open an untried avenue for the practical study of disease, have been fully endorsed by his professional brethren."

With our thanks for favors conferred, we desire to express our congratulations at the success of the enterprise in which Dr. B. is engaged, and he will permit us to indulge the hope that such signal success will inspire him with resolution to make further efforts for the improvement of practical medicine, and the achievement of other and more brilliant triumphs.

To speak of the mechanical execution of the book, would be but to reiterate what we have said on many other occasions, and could not add to the enviable reputation already enjoyed by the publishers. K.

Human Physiology Statical and Dynamical, or the conditions and course of the life of man. By John William Draper, M. D., L.L. D.

Considered in the abstract, as a connecting link in the great circle of human knowledge, or in connection with anatomy and Pathology, as the basis of practical medicine, the science of Physiology, is confessedly of vast importance to our race. That its principles and facts, therefore, ought to command the most exalted talents and to be studied with the most critical care, is a proposition,that seems self-evident. That no doctrine, as such should be accepted or permitted to be embodied within the pale of Physiology, until it shall have been made the subject of well ordered experiment and passed the ordeal of all the tests, which the appliances and improvements of the present time

afford, seems equally evident. The foundation of the work, as regards man, that of supply and waste, consumption and elimination or excretion, and their due relation, one to other, their modifications, also, and the influence of numerous causes and of the different stages of life on these fundamental principles of the living economy, all offer a novel mode of treating the science of physiology and yet a mode, which comports with the soundest reason and most enlightened phylosophy. Whether, however, the division of the work into "statical and dynamical" or the attempt to study the laws that control vitality by the same rules and through the same language or terms, that are applicable to investigations, concerning inert matter, that belong to "positive science" is altogether appropriate or advantageous, does not seem so clear. Indeed there appears a manifest incongruity in treating, under the department of statical physiology, of locomotion in extenso, and under that of dynamical, of sleep—its necessity, duration and manner of approach, and of ultimate disolution. The author, however, seem to have discovered the "expediency" of such a division in the "necessity of conforming *his course of lectures* to the wants of a medical class." What the particular conditions, constituting "the wants of a medical class" as stated in the above quotation, are giving rise to such a particlar "expediency" or necessity does not appear. We believe it is conceded in reference to professional science in particular, that the introduction of new terms, though more specific in meaning or, literally considered, more strictly accurate, and in regard to science generally the use of the technical language, which time and custom have sanctioned, in one department, in the illustration of another, is not altogether profitable; on the contrary, that it tends to embarrass, rather than promote progress. Changes in nomenclature, therefore, often give rise to ambiguity instead of removing barriers to improvement. Doubtless there are, in the progress of growth and development and even in the changes incident to adult life and the depreciation and decay of age, intermolecular movements, that are essential to organic life. So there are, also throughout the domain of nature, not only in matters, endowed with qualities, nearly allied to life, but in inert matter. In an extended definition of the term, these may

perhaps, be denominated dynamic, but they differ materially, from the movements, that belong to masses and singularly enough from those of the entire animal machine, as exhibited in the acts of standing, walking and running, so fully treated of, in the last chapter of the statical department of the work. Statical Physiology would appear more justly predicable of anatomy in the abstract;—"the study" of the human machine, "as it exists, not as it acts." But a bibliographical notice of Professor Draper's book, not an extended review, is what we propose, and yet a few items demand special consideration. We have, already suggested that no doctrines ought to be embodied within the pale of physiology until they have been subjected to all the trials and tests. which the improved methods of studying the obscure and comple laws of nature afford. We deem it a matter of regret that the work does not bear, more extensively, evidence of original, independent investigation; that the learned author has not found it convenient or consistent with his inclinations to study the great principles of his science in his own way, experimenting, and testing every fact and principle, and thus, putting forth, only, what he knows to be fact —stating nothing upon trust.

It becomes us to speak with much deference, but certainly, it would seem that he must have had facilities at his command, sufficient to have enabled him to accomplish all this. On the contrary, he expressly desires, in his preface, both his "pupils and readers constantly to bear in mind, that, beyond the suggestion of a trifling fact or idea, here and there, the matter presented is not original with him, but derived from other sources—the author's reading, during many years, of the chief works on Physiology and its kindred subjects." In this connection, and with a view to show how necessary it is, as we have already indicated, that Physiology, throughout, requires to be re-written, every suggestion and doctrine, thoroughly scrutinized, new and searching experiments instituted, and truth, alone, stated, we desire to call attention to certain alleged remarkable inaccuracies in reference to important points in comparative physiology. For example, a description and illustrative figure of the nervous system of the Asterias will be found on page 279, fig. 129.

In reference to this topic, our associate, Dr. Henry Goadby, whose life has been devoted to microscopical investigations, and to minute anatomical research, holds the following, viz : this animal, is said to be *cyclo-neurose*, while the author of the treatise before us describes it as *cyclo-gangliated*, thus elevating the star-fish to the standard of the mollusca. This, is regarded as a serious defect in a work claiming to put forth the accepted truths of science, inasmuch as it is believed not to have the sanction of the latest authority, since Grant, Rymer Jones, Owen and Carpenter, the latter, down, even to the latest edition of his work, that we have examined, all declare Asterias, together with the individuals of the class to which it belongs, to be cyclo-neurose. Truth declares, however, that it is neither one nor the other, and further, that if it possess a nervous system, it has not, as yet, been discovered. Moreover, Dr. G. is prepared to show, both from historical facts and from his preparations, now in the Hunterian Museum, London, and one at this time in his possession, the truth of this declaration. Hence, he avers that, in 1841, while engaged in the city of Edinburgh, in examining the immense collection of marine animals, furnished by the late Sir John Graham Dallyle, including numerous specimens of the largest Asteriæ, anxious to know the actual anatomical structure of their vascular system, he injected from the heart what had before been universally regarded as their nervous system, which proved to be instead of a nervous structure, a circular artery, surrounding the oral aperture and distributing a branch down the centre of each ray, while not the slightest trace of a nerve could be found. In the course of these investigations, the entire anatomy of the largest known Echinoderm—Cucumaria frondosa was displayed in a series of preparations now in the Hunterian Museum, and, although the entire structure of each was literally tortured, and it was well understood where the nervous system was said to be located, even the remotest trace of it could not be discovered. Indeed, Dr. G.'s present collection contains the anatomy of the Syphunculus—another Echinoderm, but there is no nervous system, hence, unquestionably, the cyclo-neurose animals of Grant ought to be ranged with the Acrite division of Owen. The figure (132) representing the nervous system of Aplysia, copied from Cuvier's original, is calculated to lead the reader astray, inasmuch as the ganglion described in the text as "abdominal" is the branchial ganglion and all the nerves, issuing from it, are distributed to the respiratory tuft, (branchiæ) which is dorsal in position. A preparation, displaying the nervous system of Aplysia, perfected during the investigations, referred to above, and now in the Hunterian col-

lection, gives a very different and much more extensive illustration of the nerves of this beautiful animal, and its teachings are essentially different. Again, Dr. G. takes issue with the description and representation, on pages 312 and 313, of the nervous system of the articulata, as regards the respiratory tract. The entire of this description being copied from Newport, through Carpenter, Dr. Draper is no further responsible than as he has given the sanction of his name and authority to the errors of the writer from whom he quotes. As early as 1842, minute injections of the Limulus in the Royal College of Surgeons, England, exposed the dorsal vessel, (heart,) and its three terminal arteries and exhibited the lateral vessels, right and left, terminating in an arterial ring, beneath the œsophagus. Thence a vessel passed *over* the ganglions of the nervous system, giving off branches, at short intervals, in front of each ganglion and distributed to the respiratory organs. These arteries were, in truth, what had been described as the respiratory nervous system of insects and other articulata. Another specimen was injected from the heart and a section, (a side view,) of the animal made for the purpose of showing the full relation of these arteries in situ. After the completion of these dissections, Mr. Newport read a paper before the Royal Society upon the "nervous system of insects." in which he confessed that the supposed respiratory tract was, in fact, a system of arteries. The dissections were highly complimented by Dr. Todd, in the Encyclopedia of Anatomy and Physiology, and Newport's paper was published in the Phylosophical Transactions. Thus, it is shown that the theory of respiratory nerves in the articulata was exploded, at least fourteen years since, and yet it is reproduced in the treatise under consideration, as conceded truth. So, too, in Scolopendra, (centipede,) the so called respiratory nerves had been demonstrated, prior to 1841, to be arteries, by the successful use of the injecting syringe, inserted in the dorsal vessel. How difficult it is, nay, how nearly impossible, to discriminate between *a vessel filled with coagulated, colorless blood,* and a nerve, and especially when, as in the examples now under consideration, the structures are so minute as to be microscopical, need not be stated. Both the tissues are equally round, and (frequently) white, and the amateur, even, who has fortunately triumphed in the struggle, will not readily forget the embarrassments encountered. In the chapter on "voice," the sounds emitted by insects are alluded to, and a figure of a spiracle given. Now, *all* insects are provided with spiraculæ, and if the respiratory organs are to be held responsible for the production of sounds, as claimed in the text, all insects should be musical, whereas, there

are but few, comparatively, that are endowed with this capability. Moreover, when it does obtain, *special organs*,—now of one description, now of another, are provided, as the cabinet of Dr. G. will abundantly show. But the spiracles of insects are not single: They are *external* and *internal;* if, then, there be such mechanism as that alleged, it ought to be found in connection with the internal spiracle. As well might the external lips of a man be figured as the exponent of the organs of voice, in the human subject, as the outer, horny spiracle of an insect, in illustration of a like apparatus, Again, the author avers that the caterpillar has ten pairs of spiracles. It is well known that this insect, has only nine. They may be perceived by the naked eye, and in the preparations of the entire respiratory apparatus, in Dr. G.'s cabinet, at this time, no more than the last mentioned number can be discovered. The author claims to have treated of Physiology as an exact science, thereby seeking to divest it of the "mysticisms" and "metaphysical conceptions" which he concludes have come down to us from the dark ages, and affirms that "it was chiefly for the sake of aiding in the removal of such mysticism," that he has been induced to print "his book."

He believes too, that it is the duty of the "rising generation of physicians to exorcise such nonentities as irritability, plastic power, vital force" &c. He regards the discrimination of physiological knowledge as of great importance to the physician, and alleges that empiricism could not flourish, as at present, if the structure and functions of the body were better understood, and that important advantages would accrue, "if the elements of this science made a part of general education." Such a diffusion of physiological knowledge," he observes, "would not only tend to the repression of empiricism, but would also exert an effect in raising the standard of acquirement among medical men, themselves. He observes further. "That a great revolution is impending in the practice of medicine, no one who is at all observant of the progress of science can doubt. The great physicians of the future will be the great physiologists. He, who can best correct the imperfections of a machine, is he, who best understands its structure and action." Certainly, no feature of a scientific production could better please us, than one which seeks every on proper occasion, to impress a moral, or awaken a pious aspiration. In this connection, we remark, it gives us pleasure to express our cordial approval of the design of the author, as evinced in the following:

"The reader will also find that the opportunity is taken whenever it occurs' of diverting his attention to those arguments

which the subject offers, for elevating the moral nature of man. Believing that the right progress of society depends on its religious opinions, and observing with concern the growing carelessness which is manifested in these respects, in our times, the author has not hesitated to show how advantage may be taken of the facts presented by Physiology."

May we not, however, suggest our apprehension that the obvious design of the author may be contravened by the doctrine emphatically announced in the following, from chapter fourth of the second department—Dynamical Physiology?

The theme of the chapter is reproduction and development. After some preliminary remarks he observes. "Starting from a solitary cell, development takes place and according as extraneous forces may be brought into action, variable in their nature and differing in their intensity, the resulting organism will differ. If such language may be used, the aim of nature is to reach a certain ideal, model or archetype. As the passage towards this ideal model is more or less perfectly accomplished, form after form, in varied succession arises. The original substratum or material is, in every instance, alike, for it matters not, what may be the class of animals or of plants, the primordial germ, as far as investigation has gone, is in every instance the same. The microscope shows no difference, but on the contrary demonstrates the indentity of the first cell, which, if it passed but a little may on its forward course, ends in producing an obscure cryptoganic plant, or if it runs forward toward reaching the archetype, ends in the production of man. The diversity of form, that is eventually presented, depends, then, not upon the constitution or aspect of the primitive cell, but upon the influence of the many surrounding agencies, to which it is exposed." "Not only is the primordial cell in all instances the same, but the first stages of its career are in all instances, identical, and this, whether we consider it in the lowest or the highest cases belonging either to the vegetable or the animal kingdoms." "This career of development applies equally, to the case of any individual animal or any race of animals. Thus man himself, passess through a great variety of forms, from the condition of a simple cell, these forms, merging, by digrees, into one another; the form of the serpent, of the fish of the bird; and this, not only as regards the entire system, but also also as regards each one of its constituent mechanisms--the nervous system, the circulatory, the digestive." If all this be true, it may be asked is the "andvantage" derived from "Physiology," on the side of morality and religion; or on that of immorality and the rankest infidelity. Further in a scientific point of view, in the abstract, is it fair? Is it philosophical to predicate of the primordial germ, the primitive cell,

unequivocal sameness, not only as regards form but as regards intrinsic composition arrangement of ultimate constituents and inherent affinities or laws. Admit, as we cheerfully do, that "the microscope shows no difference," and what then? Does the microscope assume to reveal the hidden laws of vitality. Does the most enthusiastic amateur claim for it, anything more than to show the mere form, the sensible aspect ?

Do any claim for it the powers of a graduated vitometer, the capacity to " measure life temperature or to estimate germinal" capability? Reasoning from the premises, involved in the foregoing quotation, is it not fortunate for the destinies of the world, that the premordial germs, which in their progress towards their "ideal models or archetypes," became a Newton, a Bacon and a Hhoward,were not arrested, at the point, necessary to the production of a "serpent, a fish or a bird," and that the "primitive cell," whence the learned author himself originated, did not, in obedience to "the influence of the many surrounding agencies, to which it "was" exposed, turn out an "obscure cryptoganic plant." And then, what a curious medly, in the way of reproduction, would greet the vision, should the more delicate half of our species take it into their heads to reproduce the leech or the tadpole, the turnip or the pumpkin! But why not reduce the process to a "positive science?" To do so, what, it may be asked, is necessary but that the appropriate gender acquaint themselves with the requisite" surrounding agencies "and their modus operandi, and in due time, subject their systems to their action? But our remarks have already extended themselves beyond what we originally intended,. While we have deemed it incumbent to say thus much in reference to the subjects mentioned, and have observed others, that merit notice, it gives us pleasure to say, we have found much in the work deserving of the highest praise, and which has augmented our already exalted opinions of the industry, talents and untiring perseverance of the accomplished author. We do not question that whatever of error or discrepent assertion has crept into the present, will be corrected or expunged from subsequent editions, Originating from a source, so reputable, we predict, for it, a popularity, that cannot fail to be flattering, not only to Dr. Draper, but to American authors generally.

Of the mechanical execution of the book, in all particulars, it is unnecessary to speak. It fully sustains the reputation of the publishers, than which none have higher. To be found at Raymond & Selleck's. K.

Erratum.—Page 138, for "Cuvier's *external* characters," read *internal;* for "*and* the nervous system," read *as.*

THE

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ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links Connecting the Vegetable and Animal Kingdoms.—Continued. By HENRY GOADBY, M. D., F. L. S.

On the other hand it is far easier to understand that the flint, being acted upon and dissolved by potash and other alkalies, is converted into a soluble silicate of potash, or silicate of soda, which in this state, plentifully diluted with water, is absorbed by the nutrimental organs and forms the pabulum of a vast number of plants—some feeding upon it sparely, others consuming it greedily. But even here two questions present themselves of great difficulty of solution, viz.: first, how is it that the *soluble* becomes converted into the *insoluble* silicate of potash; and secondly, the law which regulates, and governs the specific and diversified forms of these silicious materials, all of which become characteristic.

At the present moment we feel a firm conviction that the production of silica alone, irrespective of other characters, is sufficient to determine the vegetable nature of the organism presenting it.

The cuticular covering of plants next claims our attention:

every leaf presents a cuticle on the upper and on the under surface, each composed entirely of cells, but in many plants dissimilar in the two cuticles. In terrestial plants the breathing mouths (stomata) are placed on the *under* cuticle; in some plants, in addition to the vast number of stomata displayed on the under cuticle, the upper one has a few scattered organs of this description. These important structures are placed upon the under surface to protect them from the action of rain, which falling upon the upper surface of the leaf, might impede their function if they were situated on that surface.

In aquatic plants, on the contrary, the under surface of the leaf is, for the most part, in contact with the water, (Pond Lily) whilst the upper surface is free.

In these, therefore, the stomata are transferred to the *upper* cuticle, as being the surfaces alone exposed to the air. These facts will be best understood by consulting figure 101, which represents the under cuticle of Ruscus aculeatus (butcher's broom). We here see the well formed cuticular cells, and at the margins where two cells join, a stoma is placed.

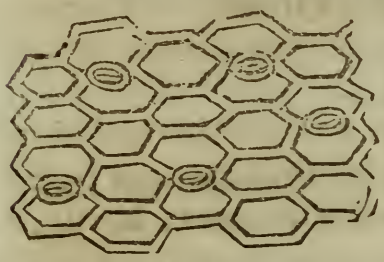

Fig. 101.

The under cuticle of the Ivy is shown at 102. In this plant the cells are of great beauty, being bounded by irregular zig-zag lines; the stomata here, occupy the centre of large cells, which seem to be specially formed for their reception; moreover, the form of the breathing mouths, as compared with Ruscus, is essentially different; *a a*, represents the cells, and *b b*, the stomata.

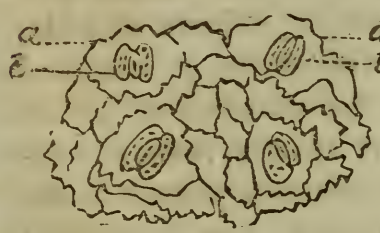

Fig. 102.

In this plant the upper and under cuticles are so exactly alike that the one can only be known from the other by the absence of stomata.

We offer another very beautiful form in the cuticle of the White Lily. The cells, *a*, in this plant are much larger than the former examples, and the stomata participate in the enlargement. They are curiously and beautifully formed, and designated at *b*.

What is the nature (structure), and function to be performed by the cuticle in plants? In structure it appears to be non-vascular; a horny and insensible layer expressly developed to protect the important tissues beneath it.

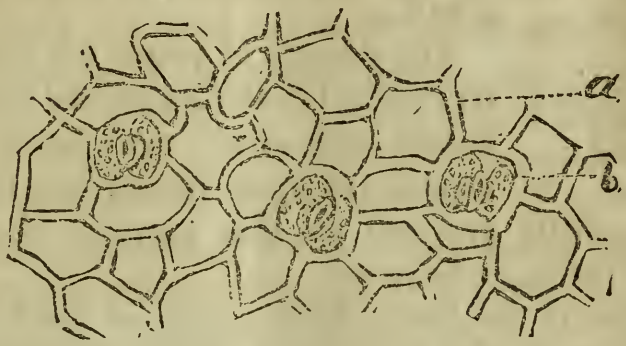

Fig. 103.

But man possesses a *cuticle*, is there any, and what analogy in the structure and function of his external covering, as compared with a plant? We shall see.

If the human finger be placed under a microscope and examined with an inch object glass, the cuticle will be seen to present a surface composed of alternate ridges and furrows. To this structure is due one of the remarkable capabilities of the human hand—its *power of polishing.* It is a well known fact that the finishing process required to give the last, high polish to steel fenders, fire-irons, &c., is accomplished solely by the hand of *women*—a man's hand being too coarse.

In this instance it appears that the *ridges* act like a file, and abrade the surface of the steel sufficiently to remove the scratches left by the former process to which it was subjected. Those persons whose hands are not accustomed to severe manual labor, may readily feel these ridges by lightly rubbing the fingers of both hands together. But what means that series of hemispherical cavities that the microscope reveals arranged in linear series on the surface of the ridges, are they stomata? Certainly not; they are the external openings of the ducts of the sudoriferous (perspiration) glands. Surely in *structure* the human cuticle bears marvelous resemblance to the like tissue in a plant! In the animal, no less than in the vegetable, the cuticle is a *horny, insensible, non-vascular layer;* the intention of its exhibition is the same in both kingdoms—to give protection to the

vital organic structures beneath, for which purpose it is admirably adapted.

All we have described is represented in figure 104, where *a* refers to a ridge, *b* a furrow, and *c* the opening of the duct of the perspiration gland.

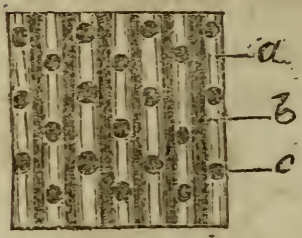

Fig. 104.

The stomata of plants are wonderfully represented in another animal tissue: thus insects and other articulated animals breathe not by *the* mouth, but by a series of mouths specially provided for that purpose—these organs are called *Spiracles*, or *Stigmata*.

The spiracles of an insect differ nearly as much in form from each other as the stomata of plants, notwithstanding that a *general* resemblance is always maintained.

The oval, dark brown spots, nine in number, seen on each side of a caterpillar's body, are the organs in question. If one of these be attentively examined by magnifying power, an appearance will present itself like figure 105, and if this be compared with the stomata of Ruscus aculeatus, (fig. 101,) they will be seen to be *nearly identical*.

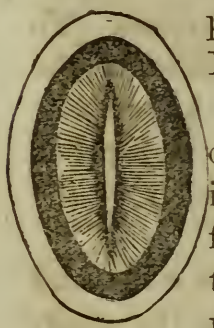
Fig. 105.

In this instance the analogy is very striking; organs formed precisely on the same plan, in an insect and a plant, and both destined to the performance of one and the same function! The external opening to the lungs of a plant and an animal identical in structure; the breathing mouth, firstly developed in a lowly vegetable, was sufficiently perfect to adapt itself to the requirements of an animal in the performance of a kindred function without change, without modification!

In addition to cuticle, there is in the human subject another covering, still more external, viz : the *epidermis*. This layer consists of a number of flat horny scales, which join at their angles, and form an exact representation of a tessellated pavement. These scales are shown in fig. 106.

The epidermis is always being formed, and as constantly thrown off in a healthy state of the skin, and the more it is

removed by washing, and friction, the more health is promoted. The entire body—from head to heel, is covered with this layer; the scurf which collects in the hair of the head, is only exfoliated scales of epidermis. Our great object in this particular connexion is *comparison*, rather than *description*, and hence we desire to point special attention to the perfect vegetable form of the scales or plates, constituting this tissue.

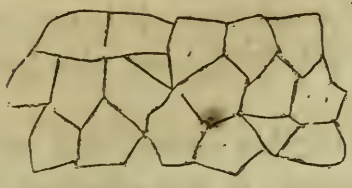

Fig. 106.

The structure of the skin is continued in all its integrity over the lips, throughout the inside of the mouth, thence into the stomach, and from end to end of the alimentary canal, under a new name, however—mucous membrane. This structure is as vascular as the skin; the vessels, and their accompanying nerves require to be protected, and this is accomplished by the development of what would be *epidermis* on the external surface of the body, but in its present situation known as *epithelium*. All mucous membranes are alike protected by epithelium, the form of which differs in respect of the particular mucous surface examined. Many of these membranes present a *pavement*, or *tessellated* form.

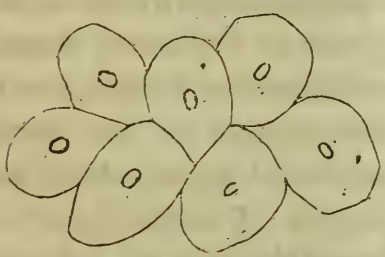

Fig. 107

Fig. 107 gives a view of pavement epithelium, which chiefly differs from epidermis, in the possession of *nuclei*. We are aware that some authorities describe these bodies as belonging also to epidermis; but the specimen in our possession of epidermis from the human heel, from which our drawing was made, does not contain them, neither do we remember to have seen these nuclei in any other specimen of this tissue.

No one appears to know what is the meaning of these spots where they do occur; unlike the nuclei of plants, they are not capable of generating, or reproducing other like structures; moreover, they are always *exfoliated with the scales*.

To resume our inquiries into the structure of epidermis we present a view of this tissue obtained from the Frog, which is,

perhaps, the most beautiful form of it known. This can be seen at fig. 108; the membrane presents all the required conditions; it is not only tessellated, but nuclei are also present.

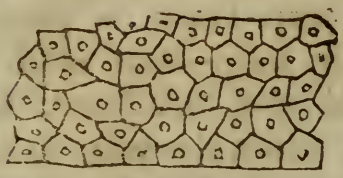

Fig. 108.

The identity of this tissue, and epithelium with the nucleated cells of plants, is too obvious to need comment.

But at this point, another tissue derived from the vegetable kingdom offers itself, and is so singularly apposite to our purpose that we cannot refrain from presenting it. Thus, fig. 109 gives the magnified appearance of the cuticle (combined with sub-cuticular tissue) of the Manilla cane; can any thing be more singularly identical than this tissue, and the epidermis of the Frog? Both present cells, precisely of the same form; both are also provided with nucleated spots.

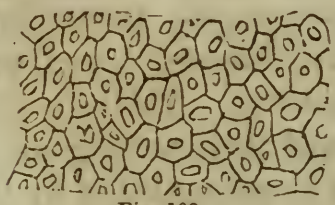

Fig. 109.

A transeverse section of the leaf of a plant, is a very instructive, and interesting object, as seen by the microscope; we offer a magnified view of a section of Balsam leaf in fig. 110. The upper cuticle is shewn at *a*, the under cuticle at *e*; *b* directs attention to a double series of oblong cells whose interior is more or less occupied with *nucleated spots*—these are minute particles of *endochrome*, or chlorophylle—which impart color to the leaf; *c*, *c*, points to a series of *rounded* cells—also filled with green coloring matter—the lower series being somewhat smaller in size than the upper. Between these rounded cells at *d*, are seen two spiral vessels.

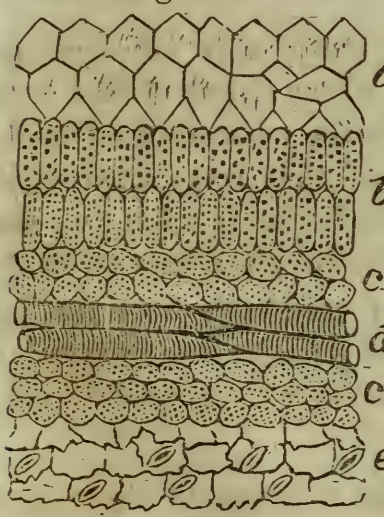

Fig. 110.

Careful attention to the figure will shew the altered form of the upper, as compared with the lower, cuticular cells, moreover, there is disparity in size.

In this plant the stomata are restricted to the under cuticle, in which they are represented.

The colored tissues of plants (leaves,) present a very remarkable analogy with the *colored* tissues of animals, and in both kingdoms the same principle is exactly carried out. Thus, the transverse section of the Balsam leaf, has clearly demonstrated that the color is wholly due to the numerous, but minute particles of endochrome or chlorophylle. Animals are not wanting in *colored* tissues, particularly the choroid coat of the eye, the object being in this tissue to absorb the superfluous rays of light which enter the eye, and they are, therefore, *black.*

The choroid coat, when sufficiently magnified, (500 diameters,) is found to consist of a dense congeries of minute cells, all containing a great number of spots, of small size, composed of a *black paint*, or *pigment*, as it is called.

We submit a view of this structure in fig. 111, being copied from a preparation of human choroid, magnified 500 times.

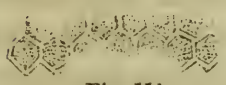

Fig. 111.

Fig. 112.

In fig. 112 is offered a view of the choroid of the Frog; the great difference between this tissue and the last consists in the solidity of the cells' walls here, as compared with the former—in both the *pigment cells* are remarkably minute, and densely aggregated ; it was the result of great labor in both cases to find portions of the preparations in which the coloring matter was thin enough to admit of being figured so that the real structure could be seen.

Other most remarkable parallel structures existing in the two kingdoms, present themselves.

In the plants of higher organization a distinct vascular system is developed for the transmission and circulation of the sap. We proceed to examine the primitive form of these vessels microscopically. We say *primitive* form, because in the progress of the growth of the plant, they are subject to very remarkable changes. In fig. 113 we give a view of a spiral vessel of Canna bicolor, and perceive at a glance that the vessel is formed by the spiral arrangement of a filament which may either be *simple* or compound. In fig. 114 we shew an-

other spiral vessel, so identical, even when tortured by the microscope that it is so difficult to discover a salient point of difference, that our artist proclaimed it the same structure, and averred it was "no use to figure it." But is it the same? On the contrary, this illustration affords a magnified view of a tracheal tube of a Caterpillar! The respiratory organs of insects consist of three distinct coats or layers, not at all times, however, distinctly visible. The inner tube appears to represent a mucous membrane, such as lines the respiratory apparatus of the higher animals; it is delicately thin, beautifully transparent, and structureless. Around this, is spirally wound a highly elastic filament, which, in its turn, is covered by a transparent membrane—sometimes found in such perfect apposition with the elastic filament, that they cannot be separated, and it becomes difficult to demonstrate it any way—microscopically, or otherwise—such is its condition in Caterpillars, and many other insects.

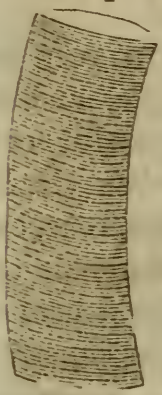

Fig. 113.

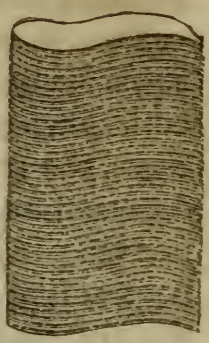

Fig. 114.

In the Locusts, however, and kindred genera, this outer tunic loosely invests the spiral filament, and from its being frequently found of a *pink* color, is very conspicuous.

The respiratory organs of insects have no *local* position, as in the higher animals, where they are restricted to the cavity of the chest, but are diffused universally throughout the body: whereever the blood flows, in fact, there are the organs of respiration to aërate the vital fluid.

Such an arrangement, therefore, necessitates an elastic apparatus of some kind in association with the structure of the ever present breathing apparatus. For example: the *blood*, of course, circulates through the loco-motive organs—legs and wings. By the action of these organs, the tracheæ are necessarily *compressed*. and were they not endowed with the capability of resuming their integrity as *round* open canals when the pressure resulting from muscular action be removed, asphyxia would result, and the creature die.

To be Continued.

ARTICLE II.—On the Structure and Functions of Insects. Continued. By HENRY GOADBY, M. D., F. L. S.

In chemical composition the skeleton of an insect consists of albumen consolidated by small proportions of the phosphates of iron, lime, and magnesia. But in additon to these constituents, there is a peculiar element, named by its discoverers the French, *chitine*, or *entomeilin*, the chief characteristic of which is its insolubility in caustic potash. It is however soluble in boiled, or heated sulphuric acid.

In addition to these a peculiar brown coloring matter is found which dissolves in caustic potash, but not in boiling alcohol.

In structure, the skeleton of an insect bears remarkable analogy to the human skin: both tissues consist of *three* layers; and from their identity the same names are employed to designate them.

Externally we have the thinnest layer—the epidermis, which is smooth, shining, colorless, and transparent; perforated with a number of minute holes, through which the hairs are transmitted to the surface. It can readily be separated from the layer which lies beneath it, in recently developed insects which have been preserved in spirit of wine.

The second layer is the soft rete mucosum, which, according to Straus Durcheim, consists of *two* layers, the upper one being smooth, and closely attached to the epidermis. It is in this layer, that the brilliant metalic colors of insects are found to reside. In many insects, also, but not in all of them, the colors belonging to this layer are highly soluble in spirits of wine; hence when insects are preserved in alcohol, this colored layer being freely dissolved, *discolors the fluid*, which thence acts as a dye on the colorless tissues (intestinal canal, respiratory organs, nervous system).

The second layer of the mucous rete, is uniformly black, or brown, and by its depth, gives intensity to the brighter colors belonging to the layer above it.

The third and last tissue, is the corium, or leathery tunic, which is composed of several layers of crossings fibres, and forms a light web, divisible into several strata. It is in this layer that the roots of the hairs lie, and from it they derive their nutriment.

Many insects, especially amongst the beetles, have a series of pits, or depressions upon their elytra (wing covers);this is caused by a partial deficiency of the corium, by means of which, the upper layers sink down, and thus a hollow is formed. The sinking of the harder epidermis forms a point for the attachment of the corium, hence these points generally stand *in rows*, between two layers of the corium.

The spines, hairs, or scales, which more or less cover the bodies of many insects, are analogous to the horny tissues of the higher animals—nails, and claws. Like the latter, the former do not possess all the elements of the true skeleton—the *corium* being invariably wanting.

Sometimes they are formed of a thickened epidermic layer only; sometimes there is the addition of the mucous rete by which they become colored.

Spines are not always simple; in the caterpillars of the butterflies they are ramose, furcated, &c., but distinguishable as processes of the epidermis by wanting a root.

Hairs, on the contrary are attached by a distinct root to the skin, and differ from the spines by their greater fineness, greater length, and better compass. Frequently they split and divide like feathers, and send off branches like the feathers of birds.. They are usually largest at the center, and become smaller at both ends; the lower end has a small knob, which sticks in the corium like a bulb in the earth.

Scales, may be regarded as *flattened hairs*, having precisely the same connexion with the integument, namely, each scale has a small pedicle, at the end of which the knobby root is placed, and this, together with its sheath is inserted into the skin.

Scales are formed by two layers of the epidermis, although remarkably minute; and then it frequently happens that a layer of the rete mucosum finds entrance between the epidermic layers. The scales of many butterflies present an iridescent lustre on the upper surface, and are uniformly brown beneath; this is the effect of rete mucosum.

We believe that the study of the bones of the skeleton is of great importance to the practical entomologist; in fact, that a

perfect knowledge of the skeleton of an insect is as necessary to him, as the intimate acquaintance of the human skeleton is to the anatomist.

We delivered lectures on, and taught entomology to the students of the sole session of the University of Albany; and on that occasion, as now, we insisted on a perfect knowledge, of this part of the subject.

The students numbered 60, and each one could pronounce the Linnean crder to which any insect belonged by the inspection, under the microscope, of a *fragment of wing*, or a *fragment* of any portion of the skeleton. The Alary system of classification is so far *perfect* that with a certain form of wing, is *invariably* associated characteristics of the skeleton by which the identity of the insect is made fully manifest.

It will be hereafter seen that the several parts of this structure are subject to remarkable modifications adapting it to subserve the various ends and purposes consistent with the necessities of the individual.

To demonstrate this fact, it will be essential to present the skeletons of different insects which we intend to do. Firstly, we offer the skeleton of the true Crustaceous beetle—*Dyticus marginalis*, the largest aquatic beetle, save one (*Hydrophylus piceus*) found in England—it measures nearly an inch and a quarter in length.*

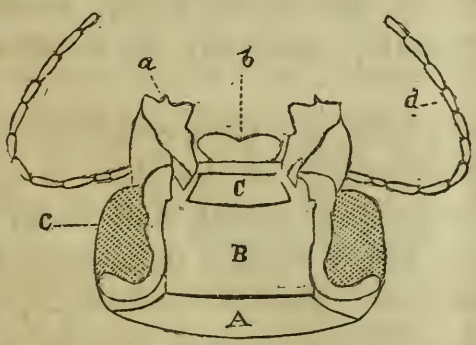

Fig. 2.

Fig. 3.

Here the head is proportionally and well formed as shewn in in fig. 2, which displays the upper portion of it. It is divisible

*This illustration, (in common with all the engraved representations of Insect structure we shall offer in the ensuing pages) is an accurate copy of the original in our possession—thanks to the talent and skill of our accomplished artist and wood engraver Mr. H. E. Downer. Magnified, 3½ diameters.

into three chief, parts, thus: A describes the *skull*; B, the *frons*, analogous to the *frontal bone* of man; C, is the *clypeus*, attached to which is the *labrum*, or upper lip, *b*.

In all insects the mouth is closed by a *pair of lips*—upper and under—more or less cornuous, more or less definite. In the insect under present consideration, as in all the beetles, these organs are particularly well developed.

The upper jaw, or mandibles, are shewn at *a*, the jointed antennæ, common to all insects, at *d*, and the compound eyes at *c*.

The under portion of the head is represented at fig. 3. The lower lip is marked *c*, the *maxillæ*, or under jaws at *f*, the *mentum* or chin, at *e*, the *gula*, or throat at D.

Attached to the under lip, and under jaws, are certain jointed organs—these are called *palpi*, or feelers—they perform the function of hands, in conveying food to the mouth. When attached to the under lip they are called *labial* palpi, *i*, in contradistinction to those of the under jaws *maxillary* palpi, *g*. It sometimes happens that the under jaws possess two pairs of these jointed organs, the second pair being always much smaller than the first, as shewn at *h*.

The thorax or chest of an insect is always divisible, but not always separable into *three* distinct portions, these are, firstly the *prothorax*, from *pro*, anterior, and *thorax*, chest; secondly the *mesothorax*, from *meso*, middle; and lastly the *metathorax* from *meta*, post, or behind.

Every segment of an insect's body, is a more or less *flattened ring*, therefore each of these divisions of the chest is again divisible into two portions—*upper* or dorsal, and *under*, or ventral portion—the side bones which connect them belonging sometimes to the upper, sometimes to the lower portion, depending upon which part of the chest they have been attached to.

The upper or *back* portion of the first division of the chest is called *pronotum* (from *pro*, anterior, and *notus*, back). The pronotum of Dyticus is shewn at fig. 4. The dark part, is the attached portion; the transparent part hung over the sides, partly concealed the head, which could retreat under it, and partly encroached upon the middle chest.

The under portion of this part of the chest is called *prosternum* and is shewn at fig. 5. The ventral aspect of each

Fig. 4.

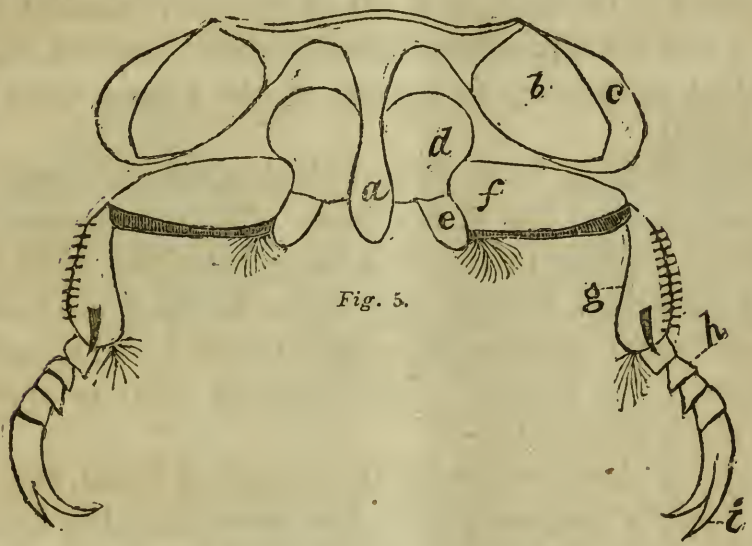

Fig. 5.

part of the chest possesses a *sternum*, or breast bone ; this is shown at *a*. In this beetle there are two large, shield-shaped bones, *b*, which perform the function of shoulder blades, but inasmuch as there are superior organs, to which the term *scapula* more properly, because analogically, applies, and because the Latin language has no diminutive of the word (scapula), the Greek has been laid under contribution to supply the designation of these bones, which are called *omia* from *omion*—little shoulder. They offer their large, broad surfaces for the attachment of the muscles of the anterior legs.

To connect these bones respectively with the upper portion (pronotum) there are side, or reflected bones, shewn at *c*.

The *hip*, or coxa, is liable to great variety of form; in this instance it is round, *d*, and fixed; in some insects it works freely in the acetabula to which it is articulated.

The student in anatomy will readily perceive that in describing the structure of insects, he is brought in contact with

old, and familiar expressions. To avoid the unnecessary multiplication of terms which, in a science so vast as natural history confessedly is, would be very inconvenient, the same names are employed to designate organs which have their representatives in the human subject. Under any circumstances, the study of the *structure* of insects, is to be regarded simply as a (peculiar) branch of Comparative Anatomy.

Articulated to the coxa, is the *thigh* (femur), marked *f*, and between it and the hip, a little bone not always present, marked *e*, and called *trochanter*, (a process of the human thigh bone has this name).

Joined to thethigh, is the *shank* (tibia), *g*, its outer and inner surface beset more or less with spines. To this succeeds the *foot* (tarsus) *h* which in this beetle is composed of five joints, (they are called phalanges, because they represent the small bones in the human finger) of these sometimes the first, and sometimes the last joint is the longest. The ultimate joint is provided with two *claws* (unguis) *i*.

The hooks of the claws are equal, unequal, or broad, and compressed. Usually they are simple, but sometimes they are bifid and found occasionally with serratures on their internal surface.

The number of joints in the foot varies from one to five, and forms a valuable characteristic of modern classification. The feet, however, are found frequently unequal in their development in the same insect.

Thus, the feet of the posterior legs, will often present five joints, whilst the other two pairs of legs are furnished with feet consisting of four joints only.

This diversity is very common, and requires that the feet of all the legs should be carefully examined, and the joints counted, otherwise great mistakes may be committed.

The mesothorax, in addition to a pair of legs always found, without exception articulated to this division of the chest, presents in addition a pair of wing-covers (*elytra*), or true wings as the case may be. In all the insects possessed of four wings, or their equivalent protectors, one pair of these organs is always found articulated to the mesonotum (back plate). In those insects with only two wings (Diptera), these organs invariably occupy the central segment.

The necessity of providing bones for the articulation of the superior organs of locomotion, no less than special shoulder blades (scapulæ) for the attachment of the muscles essential to their motion—combine characters which render it easy to discriminate between this part of the chest, and that which precedes it.

In many insects, too, this segment is rendered conspicuous by the development of a bone peculiar to them (Hemiptera), and to this portion of the chest called *scutellum*.

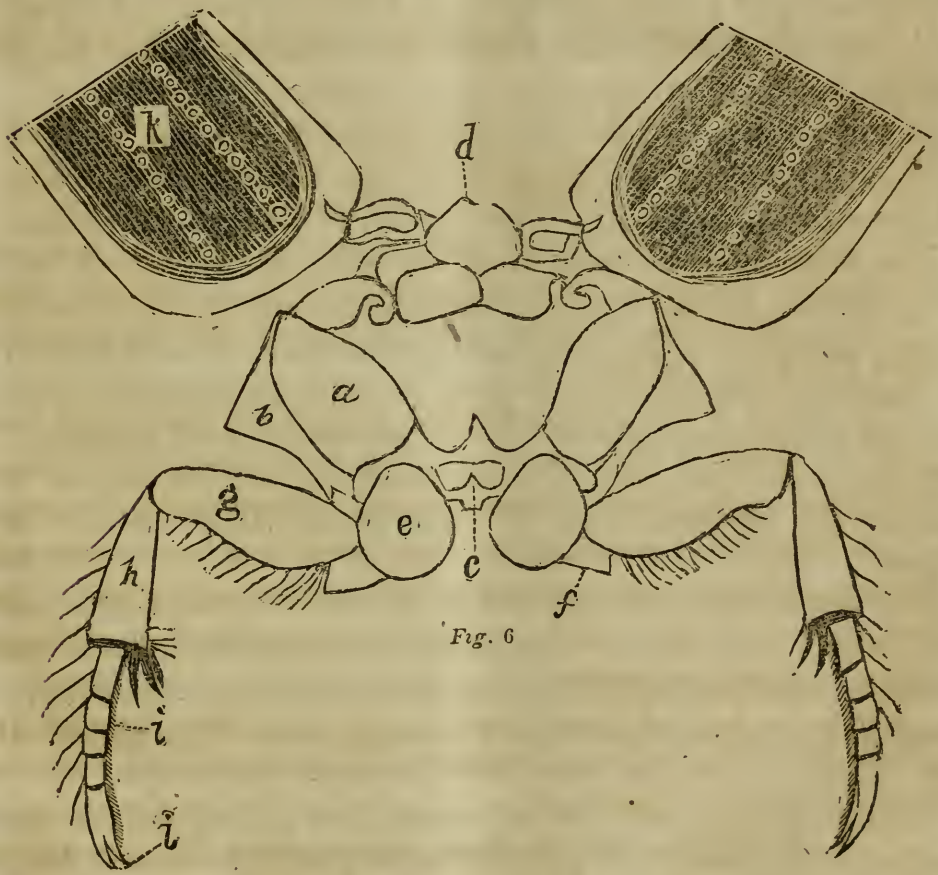

Fig. 6

Figure 6 represents at one view the whole of the bones belonging to the second division of the chest—mesothorax.

The mesonotum is above—the mesosternum below.

Letters *a*, and *b*, represent the scapula of the superior wings, in this instance, however, wing cases. These shoulder blades are provided for the attachment of the large and powerful muscles necessary to put them in motion; in other words, to fold, and unfold them. At *c*, we see the sternal, or breast bone of this segment; beside it, *e*, represents the rounded, fixed coxa,

or hip, attached to which and assisting to form a joint with *g*, the femur, or thigh, is *f*, the trochanter. The tibia or shank is shewn at *h*, on the lower portion of which a pair of strong spines are shewn; *i*, directs attention to the tarsus or foot, composed in this, as in the former instance of five joints; on the terminal phalanx is seen a pair of equal hooks forming the claw. The bones of the mesonotum are shewn at *d*, to the sides of which are articulated the crustaceous wing covers (elytra), *k*.

We have already observed that the elytra of some beetles are conspicuous for the possession of *holes* of greater or less size, and have described their anatomical condition; this insect affords an example.

It will be seen too, that these holes (or *depressions*, for such they really are) are symmetrical in their arrangement, placed in linear series, and in the direction of the fibres of the corium.

The third, and last division of the chest is the *metathorax*; this, like the former segments is divisible into two portions—upper and lower. The *back bone* (so to speak) of each portion of the chest consists of *four* bones, or their elements; they are not however, always visible. They are seen to good advantage sometimes in one division—sometimes in another, whilst it occasionally happens that, in some insects they cannot be defined at all.

The *metanotum*, however, of Dyticus, offers an exception, as will be seen by reference to the figure in which *three* bones are distinctly visible (see fig. 7), and the fourth bone—beautifully developed, is placed above the dorsal segments of the abdomen (fig. 9.)

To the metanotum the true wings are articulated in the beetles; and the second pair in butterflies, lace-winged-flies, and Hymenoptera (bees &c.) A series of small bones are frequently found to contribute in forming the wing joint, of which examples will be hereafter given.

To be continued.

ARTICLE III.—The Mode of Making Minute Injections of Man and Animals,—by HENRY GOADBY, M. D., F. L. S., &c.

Although highly desirable, as the demonstrator of the capillaries of *normal* tissues, I do not think this kind of injection fitted for morbid preparations, the infiltrated gelatine producing appearances of a puzzling kind, and calculated to mislead the pathologist.

In preparing portions of dried, well injected skin for examination by the microscope, I have tried the effect of dilute nitric acid, as a corroder, with very good results. But probably, liquor potassæ would have answered this purpose better.

When size injection is to be employed, colored either with vermilion or the chromate of lead, the animal should be previously prepared by bleeding, to empty the vessels; for if they be filled with coagulated blood, it is quite impossible to transmit even size, to say nothing of the coloring matter. Hence the difficulty of procuring good injections of the human subject.

But with the "chemico-gelatinous" injection, no such preparation is necessary; and success should always be certain, for the potash liquefies the blood, while constant and long-continued pressure by the syringe drives it through the parieties of the vessels into the cellular tissue. The large quantity of infiltrated blood—the invariable concomitant of this process—characterizes this from all other modes of injecting, and is a distinctive feature of these preparations.

I find that a superior preparation of gelatine is now on sale at the grocers' shops, nearly equal in appearance to isinglass.

The only preparations of gelatine extant when we made the experiments recorded in our paper, contained a large quantity of dirty insoluble gluten, from which defect we venture to assume the French gelatine is now free.

About the year 1849, Dr. P. B. Goddard, of Philadelphia, proposed a new injecting material.

He took a small portion of vermilion and rubbed it down in a mortar with linseed oil; to this, he added an excess of sulphuric ether. The intention is to employ the ether as a vehicle for conveying coloring matter into the capillary system, which is left behind by the subsequent evaporation of the ether. By this

process we have seen some very minute, and beautiful injections, the capillaries being round and full, and retaining their *normal size*, very nearly, whereas in *size* injections they are always preternaturally enlarged.

We so soon succumb to the anæsthetic properties of sulphuric ether, that every attempt to use this form of injection in our hands has failed, simply because we have been compelled to discontinue its use to escape etherisation; but it is doubtless a good injection with those persons not so prone to its influence as ourself.

We prefer another form, which is equally good: viz., after intimately mixing the coloring material, red or yellow, with linseed oil, substitute an excess of *turpentine* for the sulphuric ether. The results of the latter in our hands have been fully equal to any thing we have seen by the ether process.

It has frequently happened that similar inventions originate at the same time, in different parts of the world, by men who have never had the slightest communication with each other; and it may happen we are giving expression to a plan which, whilst we believe it originated with ourself, may have been used by other operators. Since our residence in this country (7 years) we have occasionally seen European injections, and a close examination of some of them has convinced us that *size* was not the material that had been employed in their procuration; in fact, they more nearly represented the appearance and effects we have produced with the turpentine (or paint) injection, than anything we can compare them to. If they were not size, as little were they chemico-gelatinous; neither were they ether injections—we still think they were a much diluted (by turpentine) *paint*. These remarks apply more particularly to injections of great beauty, by Professor Hirtl, of Berlin; and another, and equally significant fact was also apparent—that the injection had not been made in *gross* (in the *body*) but in *detail*, thereby rendering necessary appliances also of our invention (hereafter to be described) of which we have never seen any description.

It is proper to remark that in making either of the two latter injections, *quantity of coloring matter* is immaterial; it is only

necessary to make it sufficiently fluid with oil, in the first instance, and to have a *large excess* of ether, or turpentine, ultimately. In use, it should be well mixed up, and a charge drawn from the upper surface while the particles of coloring matter are subsiding.

It will readily be conceived that if equally good, these latter described forms of injection are most desirable, inasmuch as they are soon prepared and are made and used *cold*, which is of great advantage.

In our experience there is one royal road to success with injected preparations—*first empty the vessels*—it is easy enough to refill them. In making preparations of the lower animals, dogs, cats, frogs, &c., &c., we invariably *bled them to death*—after which, allowing them to rest till the rigor mortis had passed off, we *never failed* to make good preparations.

This must have been, of necessity the *secret* which Ruysch could not divulge—he is said to have *shuddered* when importuned on this subject. Having charge of a large public hospital, it is easy to understand that when he had an already attenuated and good subject for injection, whose case was hopeless, or nearly so, that he *did not scruple to use the lancet freely*, and thus prepared it secundem artem, for his injecting syringe, and museum! For many years we have not doubted that this constituted his *sole* secret—one that he could not divulge, without accusing himself as a murderer. Suffice it that no man ever made such splendid injections of the human subject as those he left behind him.

We have frequently been asked what vessels we inject by to procure certain preparations, and perhaps a few general instructions on this subject may not be inappropriate.

It may be well to premise that, as a rule, *veins* should be preferred to *arteries* for the purpose of ensuring fine injections. He, who has seen the circulation of the blood, in the web of the frog's foot by the microscope, can have no doubt on this subject, as he will have seen that an artery terminates in *a* capillary, but that these vessels empty themselves into *numerous veins*, ergo, the shortest way to reach the capillaries is *through the veins*. Some preparations, however, offer an exception to this rule.

We write these papers for the *student*—not for the already accomplished manipulator.

If the intention be to inject the alimentary canal, from the œsophagus to the anus, insert a pipe in the *portal vein*, as it enters the liver. The anatomist knows that this vein is found to the right of the Lobulus spigelii, its direction being to the *left.*

By this vein, the whole alimentary canal will be beautifully injected with *any form of injection*, if the subject be attenuated, or the vessels previously emptied; moreover, the entire process is carried on beneath the operator's vision, and he can see, therefore, when to discontinue his labor, for fear of producing extravasation and spoiling good preparations.

The vascular structure of the liver is best displayed in a series of injections: the first should be an exposition of the distribution of the portal system. For this purpose the portal vein should be cut as *near to the intestine* as possible, and a pipe secured in it, through which the injection must be thrown till the external lobular surface be minutely injected. The liver injected through the portal vein may have *yellow* injection. Another liver may be injected by the *hepatic* veins with light colored smalt blue. Still a third liver should have, in addition to the two latter systems of vessels, the *hepatic arteries red.* Such preparations are found in our collection, and are exceedingly instructive.

If it be desired to inject a kidney of any animal, the great object will necessarily be to shew the Corpora malphighiana—Malphighian tufts—and to accomplish this the *renal artery must be employed.*

So, if it be desired to shew the Corpora wolffiana in the kidneys of frogs, toads, and fishes, the artery must be invariably used for the purpose.

To inject the tissues of the eye minutely, we have always best succeeded in removing them *very carefully* from the body, and inserting pipes in the opthalmic artery and vein; firstly injecting through the vein till blood colored by injection comes from the pipe inserted in the artery, and then throwing injection through it.

By this process we have made some beautiful preparations of the choroid coat, retina, ciliary processes, venæ vorticosæ, &c., of a number of animals.

Injections of the lung are easily made: in the frog, a bifid pulmonary vein will be seen passing over the bulbus arteriosus; insert a small pipe *beneath* the bifurcation, that is to say, as close to the heart as possible so as to embrace both branches of the vessel: thus *both* lungs will be injected. In man, and the higher animals it is necessary to insert pipes in the pulmonary arteries, and veins, injecting by the veins until the injection appears through the pipes inserted in the arteries, when they in their turn should be used till the surface show indications of fullness.

If the lung be human, a large pipe should be secured in the trachea, or large bronchial tube, through which *tallow*, made fluid by heat, should be injected to the *air cells*, which cannot well be seen in a state of collapse; in this condition the organ will soon dry, when it can be sliced up for microscopical examination, the slices being firstly placed in oil of turpentine to dissolve the tallow—the good preparations may then be mounted in Canada balsam.

The lungs of other animals may be inflated, and left to dry, but we have not succeeded in inflating *human* lung; the air appears to transude through the parieties of the parenchyma.

The circulation of reptiles is peculiar: they possess a *ventral vein*, which occupies the mesial line of the abdomen—it assists the portal vein to return the blood from the intestinal tract.

If the operator can succeed in securing a pipe in this vein—no matter whether he inject up or down, he must succeed in obtaining *every tissue of the body*—even to the webs of the feet in frogs—*beautifully* injected!

We have injected numberless frogs by this vein, and always with success; so too, tortoises, and ophidian reptiles (snakes). Many frogs, however, have we injected from the portal vein, employing our dissecting microscope to enable us to insert the pipe: whenever we intended to proceed thus, we firstly bled the animal to death—a process which will occupy the operator *four hours!* The best plan is to open the chest, and snip off the apex of the heart; this will be followed by an instantaneous gush

of blood, immediately after which a plug will be formed and the circulation go on as well as ever; this, therefore must be removed, and the process be repeated simultaneously with the formation of other plugs. The operation is undoubtedly tedious and tiresome, yet the ultimate results—the vessels being entirely emptied—will fully repay the manipulator. In our experience, far less time is consumed in carefully preparing, and well injecting *one* frog, that in a series of abortive attempts with several.

There is, however, always more certainty of obtaining a large number of beautiful preparations of every tissue of the body from *fœtal*, rather than adult subjects. Fœtal lambs and calves form excellent subjects; in these, a pipe should always be secured in a vein, and the like care and caution displayed as already advised in regard to a human fœtus. The bodies of such are *tender*, and should be carefully handled lest the skin be broken and a gap formed for the escape of the injection: whenever this occurs there is an end to the process.

(*To be continued.*)

ARTICLE IV.—Medico-legal Testimony.

The following paper is intended to be a comment on the anatomical and medical testimony recently given in a murder trial in Macomb Circuit Court, where David Lapham was indicted for the murder of James Warner. The principal object of the writer will be to illustrate how medico-legal testimony may be perverted against the ends of justice, through insufficient and unskillful *post-mortem* examinations.

In my comments on the medical testimony, I shall endeavor to show, that the *post-mortem* appearances, as testified to by the principal medical witness for the prosecution, afforded no sufficient explanation of the cause of death; that the symptoms as detailed by the different witnesses, after the reception of the second injury, pointed clearly to lesion of the brain

and not of the lungs; that both the *first* and *second* autopsies were insufficient for the ends of justice; the *first* because no cavity except that of the chest was examined, and the *second* because no cavity except that of the cranium was examined, and *that* in a most superficial and imperfect manner, as shown by the testimony of the examiner himself.

Before proceeding to the consideration of the medical testimony it will be necessary to glance at the testimony in relation to the circumstances under which the alledged fatal injury was received.

It appears that David Lapham (the accused) met James Warner (the deceased) on Monday forenoon, Sep. 21st,1856, at a grocery or grogshop kept by —— Hart, in the village of Mount Clemens; that they were both intoxicated, Warner the most so; that after some trifling altercation, Lapham threw Warner on the floor, seizing him by the collar of the coat, and kicked him one or more times on the back, shoulders or chest. In regard to this, the testimony is vague and unsatisfactory, both to as the number of blows and where they were inflicted. At any rate it is in evidence that the man got up, without much appearance of injury, in two or three minutes. It further appears, that a general drunken pushing and jostling ensued among a number of rowdies, including Lapham and Warner, and that these two were pushed together so as to overthrow Warner, and that when he was down Lapham threw himself on him and pressed his knees on his body. Still there was no evidence of severe injury to Warner, and in a short time he got up and went into the street. This all occured between 10 A. M. and noon. From this time until about 6 P. M, Warner was about the village, drunk, but not suffering apparently from any bodily hurt. About that time [6 P. M.,] he had an altercation with another man at another grogshop, and followed him into the street using insulting and threatening language; the man knocked him down. From this time he [Warner] lay totally insensible for three or four hours, during which time he was dragged from the front of the grogshop to the shelter of an outside flight of stairs, in the neighborhood, and later in the evening to a sort of half shed, half barn, where he lay all

night on some hay, covered with a quilt, which some charitable individual had thrown over him.

The Poor-master testified that he visited him in the barn about 10 P. M., and spoke to him,but could not get an answer, he appeared stupid and breathed hard. In the morning he saw him again and he appeared *pretty sick*, wanted water, and when questioned as to how he felt, said he had a severe pain in his head; he complained of no other pain. The Poor-master took him to the house of his brother Jesse Warner, a distance of four miles [with the partial assistance of Lapham] in a buggy at about four in the afternoon of that day [Tuesday]. How long he remained *totally* insensible after being removed to the barn does not appear.

Jesse Warner, a brother of the deceased testified that the deceased did not complain of pain, when he got out of the buggy at his house on Tuesday afternoon, nor until next day near night, then he said on being questioned, that he had pain in his side and chest. When he arrived at Jesse's house he appeared stupid, and as if he had been drinking—he breathed as if he were choked up. He went to bed and on Wednesday morning seemed worse. After he was brought to his brother's house, his breathing was generally slow and labored—occasionally it would become easier and quicker, and at these times he was less stupid and his eye brightened and he was able to speak a little. Very little cough, nothing more than a slight hacking. He was all the time more or less stupid, and did not speak at all after about night on Wednesday, and remained stupid until four and a half A. M. on Thursday, when he died.

Now all this testimony of the brother goes to show a disturbance of the functions of the brain and not of the lungs. *Coma* more or less profound, absolutely so for the last eight or ten hours of his life, slow and labored breathing, absence of pain in the side until Wednesday afternoon, and hardly any cough. The state of the pulse was not ascertained, as no physician saw him alive after he was removed from the shelter of the stairway. A physician saw him lying where he had been knocked down in the evening, and testified that he was totally insensible and

also that there was some blood issuing from his nose or mouth or both, this was however rather vague.

He died at half past four o'clock on Thursday morning, about fifty eight hours after he was knocked down in the evening.

The Autopsy—This took place on Thursday evening by candle-light. External examination showed some bruises about the temples and eyes, and one on the back of the head a little aside from the center of the occiput; the skin was broken and the scalp puffy. On the chest, on the left side, were some bruises and some little punctures, scattered between the arm-pit and the lower true-rib. There were also marks on the sternum. There were three semicircles of the punctures, which looked as if made by the nails in the heel of a boot.

In the opinion of the writer the short nail heads in the heel of a boot could hardly make punctures in the skin through the man's clothing; they might possibly make bruise marks.

Internal Examination—The sternum was raised exposing the cavity of the chest. A tumor was found *between the plura and the lungs* opposite the bruises on the left side. This was an infiltration or ecchymosis.* Left lung *enlarged* and much congested right lung less so. No fracture of the ribs. Air cells filled and obliterated. The left lung took that appearance to a great degree, the right one less so. The lungs had become hepatized. Some slight inflammation of the surface of the lung and pleura. Found an extensive adhesion of both lungs to the side, some force was necessary to detach the adhesions. Made incisions into the substance of the lungs. The middle portion of both lungs was the most congested part. Put a piece of the worst part of the left lung into water, and it floated one third part out of water; a corresponding portion of the right lung floated two thirds of its bulk out of water. Considered the condition of the lungs sufficient to account for the man's death; they were unfit to carry on respiration, by reason of the obliteration of the air cells. The heart and *other organs* presented less appearance of disease, but were somewhat congested. There

*The witness afterward explained that the so called *infiltration or ecchymosis* was between the costal pleura and the ribs.

was no examination of the cavities of the abdomen and cranium.

The writer refrains from comment until the minutes of the second autopsy are given. On the first day of October, six days after death, the body was exhumed and an *examination* of the head made at the grave yard, by the same physician. The calvarium was raised,and the corresponding portion of the dura mater was removed. The witness says that he found *nothing worthy of description.* But he afterwards admits that he found *some patches of extravasated blood between the membranes of the brain.* The whole examination beyond this consisted in making two or three inscisions into the substance of the brain. The ventricles were not examined, nor was the brain or cerebellum removed, to examine their condition at their bases.

The abdomen was not examined at any time.

From these *post mortem* examinations, at two different times, the principal medical witness for the prosecution draws the conclusion,and so says in his testimony, that deceased came to his death by injuries to the chest.

I say that if a conviction could have been had on such testimony, *post mortem* examinations and medical witnesses had better be dispensed with altogether. There was absolutely no morbid appearance sufficient to have caused the man's death revealed by either of those examinations. There was no internal hæmmorrhage in the chest. There was said to be slight *pleuritis.* The congestion spoken of was evidently partial, and *principally* confined to a portion of the left lung. As to *hepatization,* the witness acknowledged that he used the wrong term, he meant congestion. The worst portion of the worst lung, when thrown into water, floated one third of its bulk out of water. This does not look much like obliteration of the air-cells. No effort was made to inflate the lungs. The adhesions were manifestly old. A pleuritis of sufficient severity and extent to have caused extensive adhesions of both lungs in sixty odd hours, would hardly be called *slight;* nor would there be an absence of pain in the chest, until a few hours before death. Yet the witness considered the adhesions the result of a recent inflammation caused by the blow. Further it was proved by another physician,that Warner had acute pleuritis

long ago. The whole of the testimony, in regard to the *post mortem* examination of the chest, bears unmistakable evidence of groping in an *unknown region*, with *a very small light* as a guide.

The examination of the head amounted to nothing at all. In the first place it should have been made at the time the chest was examined; and then when it *was* made it was lamentably imperfect. It is wonderful that, finding patches of extravasated blood on the upper surface of the brain, the physician had not the curiosity to examine its cavities and base. I close by remarking that many cases are on record, where imperfect and unskilful *post mortem* examinations have led to acquittals, even where the cause of death has been apparently obvious. The prisoner in this case was undoubtedly entitled to the verdict which he got, of NOT GUILTY.

Detroit, Nov. 28, 1856. A. R. T.

ARTICLE V.—Obstetrics—A fatal case—Immense size of fœtus and rupture of the Uterus. By PLINY POWER, M. D.

On Wednesday night, the 6th ult., I was called to see a Mrs. F——, aged 30. Found her suffering from irregular parturient pains, accompanied by frequent vomiting. Upon examination, found the Os-uteri fully dilated, and what I regarded as the head of the child, presenting naturally, and entering the superior straight. Supposing it to be no more than a natural labor, I had no apprehensions as to the result, until a protracted interval had elapsed, without materially changing the prospects of the case. Nervous excitement, with irregular pains, extreme restlessness, except during occasional short intervals of quietude, were the prominent symptoms—the presenting part, meanwhile, making no perceptible advancement. Thus the case continued until Friday morning, when, rising upon her feet, after a few hard pains, she complained of feeling faint, and on being laid back upon her bed, immediately expired.

Post Mortem Examination.—On opening the Uterus a tumor

was found, having its attachment near the fundus, nearly round in appearance, about eight inches in length, four inches in its short diameter, and weighing 4 1-2 lbs. It was quite solid—being of a semi-cartilaginous texture. The smooth and rounded extremity, presenting at the os-uteri, was mistaken by me for the head of the child. The uterus was ruptured longitudinally upon the left side, and the child, which, according to its position, would have offered a breech presentation, was found in the cavity of the abdomen.

Upon examination of the child, it was found to be well formed, but of unnatural and unheard of dimensions. Its weight was 23 lbs—its head 24 inches in circumference and eight inches in diameter. Its body and limbs were unusually large.

The patient was a woman of firm constitution, of superior strength, and had given birth to six children.

P. Power. M. D.

Detroit, Nov. 17, 1856.

Editorial Note.

The case thus kindly furnished us by Dr. P., offers important material for reflection both to the physiologist and the practitioner of obstetrics. The co-existence of a tumor of such bulk and consistence, with pregnancy passing on unsuspected till the full period of utero gestation. A fœtus of such incredible dimensions, and a condition of the patient so completely that of health, is assuredly an uncommon occurrence. These several points suggest interesting topics for consideration to the physiologist; as regards practice the following questions naturally arise: First, could the complication have been discovered, if the reporter had mistrusted anything out of the natural order of events. Second, if discovered could any procedure have been adopted by which the fatal issue would have been prevented. If the tumor could have been excised, would it have been possible,after embriotomy or other mutilation, to have delivered. Fourth, if after mature deliberation by intelligent council, would it have been practicable to have saved the child after decease of the mother, by the cœsarean operation?

SPIRIT OF THE MEDICAL PRESS.

Typhoid Fever in North-Western Virginia. By JAMES E. REEVES, M. D. Phillippi, Barbour Co., Va. *Concluded.*

An Outline of the Treatment.

The treatment of typhoid fever, in this region, has been considerably modified during the last several years. The old aphorism, *aux grands maux les grands remedes*, has proven itself to be wholly unsuited to the successful management of the disease; and we have learned to substitute for it, with much better encouragement, a reliance to a considerable degree upon the *vis medicatrix naturæ*.

As it was seen that typhoid fever presents different grades of severity, so will it appear that the treatment should be alike varied to meet the indications of each form. I shall therefore speak of the treatment in the same order that I have classified the symptoms.

The Mild Form. General bleeding I have very rarely practised in either form: but three times, I believe, in the 110 cases, all of which were among those of unusual severity in the beginning. But the local abstraction of blood, by cups to the *nucha* and temples, when headache is severe in the beginning and subsequently over the bowels when tenderness exists, I resort to freely. An emeto-cathartic of calomel and ipecac, in the beginning, I am much in favor of, and never omit it unless the bowels are too much purged without medicine. After this I am in the habit of being content with a daily change of the body and bed linen; sponging the surface, when hot and dry, with cool water; cups, and mush poultices to the bowels, when tenderness exists; a draught of effervescing water, composed of citric acid and bicarbonate of potassa, several times during the day; a Dover's powder at night to procure rest, followed by one in the morning, if the bowels are discharging too frequently; a little sps. nitre dulc., after the first few days; a cloth wet in cold water and kept to the head, when headache is present; cold water for drinks, but not in too great quantities at a time; and the regular allowance of a little food.

The Intermediate Form. In this form, instead of sponging the surface with cold water, tepid water with vinegar I think is best. Instead of the efferves-

cing water, I substitute the spiritus mindereri in the dose of a half fluid ounce every three or four hours. When there is tenderness of the bowels, I employ free cupping—not with small glasses, but the largest ones to be had—followed by mush poultices as warm as can be borne, with now and then a mustard cataplasm, large enough to cover all over the bowels; these to be used until pain and tenderness are relieved. It is always best that the bowels should be suffered to remain moderately loose. Two or three discharges a day I think are of service, and if these do not take place naturally some mild laxative should be administered. But should there be too great a looseness of the bowels, which is most commonly the case, they may be restrained by a dose of Dover's powder, three or four times a day. It is in this, and the subsequent form, that the good effects of opium, when administered with due discrimination, are to be witnessed. A favorite formula with me is tinct. opii, Hoffman's anodyne aa. iiioz, spts. lavender comp. iioz. Dose, a teasponful, given in the morning. For a night dose, six or eight grains of Dover's powder, or opium with camphor, answers an excellent purpose.

In many instances, the above treatment is all that is necessary to conduct the case to an early convalescence. But should it happen, that after the tongue has cleaned and become moist, the diarrhœa and tympanitis diminish, there is a sudden exasperation of these symptoms; the tongue just rid of its coating becomes red, smooth and dry, with an increase of diarrhœa and tympanitis, subsultus tendinum, &c., then opium with camphor should be freely administered. For this peculiar form of typhoid fever, as represented by the state of the tongue, other remedies have been highly extolled. Oil of turpentine and argenti nitras come to us upon good authority. I have used both of them, and sometimes with an apparently good result. I resort to them with good *results*, when opium is not admissable. But of the uniform good effects of opium, when the brain is not involved, for this condition of symptoms just described, when administered liberally, and with the addition of camphor, the success of the cases that have passed through my hands has established a confidence I can repose in no other remedy.

I said, when describing the symptoms of this *form*, that this sudden change of symptoms might occur, and yet the patient enter into convalescence without taking on the malignant form. When this favorable result is about to take place, the tongue, from being red and dry, coats itself with a thin, whitish fur, becomes moist; the pulse grows soft and less frequent. But if the case is to be protracted into

The Malignant Form, then our first object is to assist nature in her final struggle, to prevent the termination, by death, in the mode most likely to occur. In those cases with a red and dry tongue, as they pass into this form, hemorrhage from the bowels not unfrequently follows; and in these I continue the opium in as large doses as the patient can well bear, with a proper proportion of the sugar of lead. For hemorrhage from the gums, I have found nothing which affords more prompt relief than a solution of creosote

as prepared by Messrs. G. W. Carpenter & Co., Philadelphia. For epistaxis, when injected into the nostril, the creosote answers equally a good purpose. For the extreme debility attendant upon this form, tonics and stimulants become absolutely essential; but in the allowance of these, the state of the pulse and the skin must be carefully considered. Washing the surface with brandy and water, and the internal administration of carbonate of ammonia, wine, and the sulphate of quinine, are eligible remedies. In a few cases I have found it necessary to resort to pure brandy with quinine, and with happy results. Opium is not the least in importance of these remedies. Whenever the brain is not involved, it is *multum in parvo.* In the management of this form of the disease, my reliance upon opium exceeds that of any other remedy. In connection with camphor, I have seen it quiet delirium, induce moisture of the surface and promote gentle sleep, from which the patient has awoke quite a different person.* But it very often happens that opium fails to check a wasting diarrhœa. In these cases the bowels need not only an astringent but a tonic. To meet this indication, I have found nothing so well suited as the following injection: "Sulph. quinine, from twenty to sixty grains dissolved in from two to four ounces of sharp vinegar, and thrown up the bowels two or three times a day." Throughout this form, the state of the bowels, as regards tenderness, should not be lost sight of; but wet and dry cupping, as the case may admit, with the application of mush poultices, and the mustard cataplasms, should be attended to. Blisters over the bowels I have not seen attended with sufficient good to give them importance.

For subsultus tendinum, and a tremulous condition of the body, valerian sometimes acts like a charm. I mean the *powdered valerian*, in doses of a teaspoonful every two or three hours. Retention of urine is a common occurrence. The importance of examining into the state of the bladder daily, has already been sufficiently stated. A tendency to the formation of eschars from pressure should not be forgotten. The parts exposed to pressure should be frequently washed with brandy, and the position of the patient as often changed. When obstinate delirium, or coma, exists, I have seen much advantage result from the timely application of a blister to the nape of the neck, and the administration of a few blue pills. Should the lungs become involved, cupping, wet or dry, and a large blister upon the breast, must be early resorted to. Due attention should be paid to the diet. I have found boiled milk to suit very well.

In those cases that present the symptoms of *a severe form in the beginning*, when the pulse was full and strong, and obvious sanguineous determination to the brain, I have sometimes taken blood from the arm. But in the majority of these cases I have preferred to trust to the effect of the cold douche, and thus far with entire satisfaction. As it is impossible for us to guess cor-

* In the Half Yearly Abstract of the Medical Sciences, No. XVII, is contained a valuable paper on the use of "Opium in Irritable and Anæmic States of the Brain in Fever," by Humphrey Sandwitch, M. D.

rectly the duration of any case of typhoid fever, from any symptoms that may present in the beginning, the general abstraction of blood should be cautiously practised but whether we bleed or not, it is important that the bowels should be thoroughly purged. Along with these cases, in the beginning, there is generally a torpid state of the bowels, and requires a larger dose than in the mild form. In all these cases, if the patient be an adult, I give not less than twenty grains of calomel, followed, in due time, if it does not operate, by a dose of sulphate of magnesia, or infus. of senna. During the first few days free cupping upon the back of the neck, followed by a blister, if delirium is obstinate, cold applications to the head, a blue pill given at night, followed by a seidlitz powder in the morning, is the course of practice I usually adopt after which I omit the mercury, and pursue the course of treatment before described.—*Buffalo Medical Journal.*

Pain and Chloroform.—Dr. Blatchford thinks it important in the administration of chloroform as an anæsthetic, to make a distinction between those cases where pain exists and where it does not. Most of the fatal cases have occurred with dentists, who administer it when the system is free from pain, and also in those surgical cases, where pain did not exist at the time insensibility was produced. The system, while suffering with extreme distress, is found capable of bearing with impunity large doses of anodynes, narcotics, and stimulants, and sometimes to secure their legitimate effects, truly frightful quantities are required. This distinction may furnish an explanation why so few fatal cases occur in obstetrical practice, where pain usually exists at the time it is administered. In the Crimean war it is said not a single death occured from the use of chloroform. A French surgeon remarks, that in the field hospitals of the army the strength and power of the surgeons were doubled by the use of chloroform, as they are more masters of their action when operating on an inert mass, and undisturbed by the cries and movements of the patient. He states that chloroform was administered more than 25,000 times, and always with success. As a local anæsthetic Dr. B. combines chloroform with soap liniment, alcohol, or sweet oil, and for toothache, with creosote and alcohol.—*Memphis Med. Recorder.*

Digitalis in Menorrhagia.—A successful experiment has been tried in a Dublin hospital, where the menorrhagic discharge was arrested in seventeen successful cases unconnected with organic disease. When the infusion of digitalis was given in doses of an ounce to an ounce and a half, the discharges ceased after the second day. The experimenter concluded that the effect was not due to the action of this remedy as a vascular sedative, but to a specific action upon the ganglia of the uterus, by which the organ was stimulated, and muscular contractions produced, similar to the operation of ergot. —*Mempis Med. Recorder.*

Of the Quantitative and Qualitative Analysis of Homœopathic Medical Preparations, by EDWARD H. PARKER, M. D., of New York City.

During the last two years my attention has been repeatedly called to the drugs used by gentlemen professing to practice medicine "homœopathically." In consequence of my observations I determined, as opportunity offered, to obtain specimens of the remedies actually used by these practitioners, and sold by various pharmaceutists, and to submit them to an experienced chemist for analysis. This has been done in three instances with the following results:

The first analysis was made of the contents of two vials, marked respectively *Mercurius Solubilis* and *Arsenicum*. This is their history:

A gentleman with whom I had become acquainted in some business connections, often talked to me of his health, and of the treatment to which he was subjected by a prominent homœopath of this city. Among other powders, he showed me some which he was taking, and which I was sure contained a notable quantity of nitrate of silver. He also praised the treatment to which his child was submitted when it had a diarrhœa from teething, or other cause. A gray powder and a white one were given alternately, and the child liked to take them. His wife kept them constantly by her, and if the child had a discharge from the bowels which she thought was a little too loose, she would give her a few doses of these powders. She thought, however, that the blackish powder (*merc. solub.*) did the most good, My friend constantly urged me to try them; for, I think that because I did not rail at homœopathy but spoke of its practitioners as I would of other gentlemen, he had some hopes of converting me to his faith, than which I can conceive of no more preposterous supposition. Finally, I requested him to procure for me some of the same powders he was using for his child. This he did, and I placed them in the hands of Dr. Arthur Du Berceau, of this city, who is a skillful analytical chemist. This is a report:

One hundred parts of the white powder marked *Arsenicum Alb.*, contains 1.112 of *Arsenious Acid.* The remainder is *cane* sugar. The second marked *Solubilis Mercury*, contains in one hundred parts 11.00 of *Metallic Mercury.* The remainder is *cane* sugar. The mercury was in the condition of black oxyd, obtained by the re-action of proto-nitrate of merc. and ammonia.

The mother, when told of the amount of mercury and arsenic which she had been giving to the child, was horrified, and has since used them less indiscriminately.

At my request the same friend purchased for me a case of medicines of a homœopathic druggist. It is like those which he ordinarily sells for family use. This I also placed in the hands of Dr. Du Berceau, and he obtained the following results:

In the bottle marked Calc. Carb., 100 parts of powder contain 1.066 Carbonate of Lime.

In the bottle marked Carb. Vegetabilis, 100 parts of powder contain 0.500 fine Charcoal.

In the bottle marked Arsen. Alb. 100 parts of powder contain 1.120 Arsenious Acid.

In the bottle marked Mercur. Solub., 100 parts of powder contain 1.350 Metallic Mercury.

In the bottle marked Hepar. Sulph, 100 parts of powder contain 0.900 Sulphur.

In the bottle marked Stibium, 100 parts of powder contain 0.500 Oxyd of Antimony.

In the bottle marked Sulphur, 100 parts solution contain 0.100 Sulphur.

In the bottle marked Phosphorus, 100 parts solution contain 0.430 Phosphorus.

The fluid contents of the vials in the case, with the exception of the last two in the preceding list, were not examined, partly because I wished to preserve them to satisfy the minds of those who might desire to see for themselves; and partly because it is so difficult to do any thing more than to ascertain the quantity of solid matter which remains after evaporation of the menstruum. The qualitative analysis of organic substances is well known to be one of the most difficult and uncertain of the operations of the chemist. The sugar in these powders was that obtained from milk.

It will be observed, that in this instance the arsenic and soluble mercury are the strongest preparations, though the latter does not compare in its amount of metallic mercury with the proportion found in the first analysis. These two remedies seem to be great favorites with homœopaths, being frequently prescribed by them. Why this is we now understand.

About the same time I obtained a set of preparations which had been used by a physician who determined to try his hand at homœopathy, and took advantage of the position which he occupied in one of the dispensaries of New York to make his experiments. After his resignation, the preparations which he had been using were left in the hands of the apothecary of the institution, and some of them were selected by me for analysis. They were purchased at a different shop from those which were before analyzed, and the direction given was, that when about two-thirds of the vial in any bottle (they were solutions) were used, the vial should be filled up with proof spirits. This will, perhaps, account for some of the variations in the strength of the preparations. It was found that there was of—

Tincture of Silica, in 100 parts 0.025 of Silica.

Tincture of Hepar. Sulph., in 100 parts 0.050 of Hepar. Sulph.

Tincture of Baryta Carbonica, in 100 parts 1.450 of Carbonate of Baryta.

Tincture of Calc. Carbonica, in 100 parts 0.500 of Carb. of Lime.

Tincture of Arsenica, in 100 parts 0.025 of Arsenious Acid.

Tincture of Carb. Vegetabilis, in 100 parts 0.050 of Charcoal.

Tincture of Mercurius Solub., in 100 parts 0.100 of Solub. Mercury.

Tincture of Lachesis, in 100 parts 0.025 residue after evaporating the alcohol.

Tincture of Sepia, in 100 parts 0.025 residue after evaporating the alcohol.

Some of these preparations, as the Baryta Carbonica, contained a thick sediment which carried up the per centage. The other preparations which were left were vegetable, and were therefore excluded from the analysis.

These are all the analysis which I have yet caused to be made, but they are yet somewhat instructive. The first two preparations were obtained by the direction of a homœopathic practitioner, and one of them, the *merc. sol.*, is more than one tenth pure mercury, the proportion of the oxyd being consequently somewhat greater. The "arsenicum" contains 1.112 parts of arsenious acid, while the usual form in which arsenic is given, viz., Fowler's solution, contains one-half a grain to each fluid drachm, the dose for an adult being about ten drops.

The second analysis was of drugs sold for "family use," and it is observable that the *arsenicum* is even richer in arsenious acid than the first. The *mercurius* has a much smaller portion of metallic mercury, and yet there is sufficient in it to produce all the effects of this metal when given in small doses. The tinctures accompanying the powders, are, so near as I can tell by the ordinary modes of examination, of as great if not greater strength than the corresponding preparations used by physicians. Though contained in small ounce vials, their color is marked—the Rhus Toxicodendron, for instance, being of a deep olive color, as is also the tincture of Dulcamara. Ipecacuanha, aconite, arnica, cantharides, all give tinctures of decided color in these small vials. The aconite, indeed, I have used for patients, and find that it produces exactly the same results that ordinarily follow the use of saturated tincture. Having occasion to use tincture of chamomile, I had some made by a druggist, and filled one of the vials with it. The color of the homœopathic preparation was quite as marked as the other. The tincture of *china*, which being translated means *cinchona*, is a good simple tincture of Peruvian bark.

The third set consists of much weaker preparations, and yet here it is noticeable that, excepting the carbonate of lime and the carbonate of baryta, *merc. solub.* stands highest in its proportion.

If an average is made of the percentages of these three analyses we shall have this result: for the first 6.056, for the second .745, for the third .250. In contrast with these figures others may be put, showing the per centage of the drug which is left, in preparations made according to the directions of Hahnemann for potentizing medicines. The first dilution has in 100 parts 1 part of the drug. The second dilution has in 100 parts .01 part of the drug. Beyond that it is not necessary to go; though every one remembers how much stress was and is still laid upon high potentization, those who use the thirtieth dilution being considered very moderate. The two hundredth is much preferred by some, and yet the weakest preparation of these three classes, obtained from direct sources, is stronger than the second dilution.

It may be asked how it is that such an abandonment of "potentization"

should have occurred among homœopathists themselves, for those drugs come from their pharmaceutists, from the shops patronized by all the prominent men of that school in this city. The question can be answered only by referring to the positions which they now occupy. If these gentlemen are shown such proofs of the strength of their preparations as these analyses afford, or such as the very appearance of their tinctures give, they will not for a moment deny that we are correct, or that there is any thing in this which is inconsistent with homœopathy. They will say they are *homœopathists*, but they are not *Hahnemannists*. O no! not they. How could one be so stupid as to make such a blunder? They believe in the doctrine, *similia similibus curantur*, but they do not find that potentization as taught by Hahnemann is borne out by experience. To be sure, this is no more than the whole medical profession has been saying ever since the absurd doctrine was propounded, that it is no more than common sense teaches; but if one suggests this to them, and congratulates them on their returning senses, he gets very little thanks for his trouble. The fact, however, of this entire change of position should be more generally known and appreciated by the profession than it is, so that we may not waste time in assailing a position which has been entirely abandoned. It is safe to attribute any supposed effect of a decillionth of a grain of charcoal to imagination, but it is not quite safe to attribute to the same influence the effects of five drops of saturated tincture of aconite. Under these circumstances it might happen that a homœopath and a physician would both treat a patient in the same way, their only difference being in their process of reasoning. But give quinine in intermittent fever; the homœpath because, as he alleges, it will produce in a healthy person similar symptoms; the physician for the reason that he knows it usually cures the disease; not, as is slanderously reported, because he believes it will produce symptoms unlike intermittent fever. He is no *allo*path. It did in fact happen to a friend of mine to be asked to see a patient who was under the care of a homœpath, not in consultation with him, but because he was desired to give his opinion whether or not it was safe to trust the patient still longer under the treatment. The disease was typhoid fever, and he found Spiritus Mindereri and all the usual remedies in ordinary doses, the patient doing very well. He could not but say to the attendant, "if this is homœopathic, I am a homœpath." To be sure, the physician may write a prescription for *cinchona*, and the homœpath may write one for *china*; or the one for *hydrargyri oxidi nigri*, and the other for *merc. solub.*; one for *antimony*, and the other for *stibium*, but both mean the same thing, and the patient will get the same drug.

It is a question of practical interest to the profession to ascertain what there is of good, if any, in homœopathy. Almost every "new school" enables us to gain some profitable suggestions, which repay the labor of sifting them out of a large mass of chaff. The Hahnemannists have tried experiments in the treatment of diseases with nothing which we should not have been justi-

fied in making, and they have thus taught us something of the natural history of disease. In their progress from infinitesimals to large doses, it has been necessary for them to conceal the change in their medicines, and therefore they have studied the art of giving medicines in the most agreeable, or in the least offensive form, and in this respect we can learn something from homœopathy. The old school of practitioners, who, when called to a patient's house, seemed to make it their first duty to fill it with eight-ounce vials, have not entirely passed away, neither have their abominably-tasting compounds entirely disappeared. Their big bottles, their table spoonful doses, their nauseous mixtures, have driven and still do drive family after family to homœopaths, simply because it is human nature to desire not to drink such a mixture as tincture of aloes and assafœtida with castor oil and turpentine in equal parts, a wine glass full at a time, if almost tasteless water or a sweet powder will accomplish the same good. To doctors, even, when they fall sick, an agreeable draught is preferable to one the very thought of which stirs them to their lowest depth.

It is not necessary to point out the mode in which concentrated tinctures can be made to supply the place of less powerful preparations. Neither is it necessary to do more than hint at the frequent desirableness of giving small doses often, rather than a single large draught. A few drops of aconite tincture, in water, is vastly pleasanter than even spiritus mindereri or sweet spirits of nitre. The dose of Norwood's veratrum viride is much pleasanter than the infusion or even tincture of digitalis.

But the lesson is more important with reference to powders. For adults, solid substances can usually be given in pill form, but there is no necessity of rolling them in powdered aloes. To this day I can not rid myself of the remembrance of the disgust with which I used to swallow pills so coated, and with difficulty convince myself that the druggists now use only liquorice or more tasteless powders. Still, for these pills we must not select the most bulky drugs. The active principles of plants, when isolated, aid us in diminishing our pills, and will still more when their powers and properties are fully tested.

Children, however, do not readily swallow pills, and agreeable powders are often a great desideratum while treating them. A child's life may depend upon his taking remedies willingly and without compulsion. Thorough trituration of the drug with sugar seems to accomplish the best, especially if, when it is practicable, the doses are divided, but repeated oftener. The homœopathic dispensatories direct that powders should be placed upon the tongue and allowed to dissolve, when they are to be washed down with a good draught of water. There is some philosophy in this, for the dissolving sugar first gives the impression to the nerves of taste, and the water washes down the balance almost untasted. In the minds of children, moreover, the first taste seems to be associated with the fact of taking the powder, while the second and more disagreeable one is not remembered against the dosing. To

avail one's self of this fact, it is necessary that the sugar should be reduced to an impalpable powder; otherwise the end is not obtained. If, for instance, ordinary crushed or granulated sugar is used, it will be found that it is not an actual powder, but a mass of more or less complete crystals. On mixing a powder with these it either falls to the bottom, or, clinging to the crystals, coats them over. In this condition the sugar is less readily dissolved than when in powder, and in addition, each crystal is covered on its outside with the drug, which is first dissolved and gives its taste to the whole mass. Here, then, is the advantage, and the only one of the triturations recommended by Hahnemann.—*From the Transactions of the New Hampshire State Medical Society.*

Influence of Consanguinity on the offspring.

In a late number, we made a few comments upon an article in the *Westminister Review*, and chiefly with reference to its positions relatively to the hereditary transmission of insanity. With the same views in mind that led us to advise against the contraction of marriages where such a taint has a chance, even, for extension to offspring, we come to the consideration of a subject of scarcely less importance.

It is an axiom that "what everybody says must be true." Without fully adopting this, it must be confessed that a large amount of truth prevades most of the strongly-rooted popular notions and prejudices. Just as those who are termed "weather-wise," really acquire a surprising acumen in foretelling fair or foul weather, by constant observation of atmospheric signs, so men, by a continual process of inferences from certain data, gradually accumulate valuable evidence in favor of other process; and it is well known that many, if not most, of their conclusions stand the test of every day's trial.

It has been very truly remarked that those who are occupied in the breeding of domestic animals, show a very keen insight into the workings of Nature; and that, were the same care and wisdom exercised in the pairing of human beings, the race would be vastly improved. There is no doubt of this not only because "everybody says so," but on scientific grounds. We are not about to recommend the application of this excellent brute-management to the world at large, because to advise an impossibility would be ridiculous, however great advantages might arise from certain of its provisions. There is a formidable obstacle to such a course—and one to be rejoiced at—namely that although man, whether "in honor" or not, is too often "like the brutes that perish," yet his immortal nature and tender affections cannot be brought, like the neck of the ox, under the yoke. It is doubtless quite true that Love laughs at laws as well as at locksmiths, and is not at all fond of going to school. We are not, however, partizans of the "Free-Love," doctrines largely

advocated by certain insane people in our days, who should, one and all, emigrate to Utah; and, moreover, we do believe in allowing sound judgment and that very *un*common compound, common sense, to have more weight than they do in that important transaction, marriage.

Only one question will occupy us at this time, and for that we have not a tithe of the space that, in our estimation, its importance demands: it is, is marriage between nearly-related individuals, wise? Is it not, rather, in the great majority of instances accompanied or followed by physical or mental evils which merit the attention of the community? And not only a passing attention. Very possibly the occurrence of these evils will be admitted, but in the multiplicity of reasons why union within the bands of consanguinity should often take place, ulterior results are either lost sight of or voluntarily put away. If only a portion of the ills of this life can be prevented, he deserves abundant thanks who subtracts from the list even one ailment or misery.

It will be found to be a somewhat current opinion that marriage between near relatives is, at least, inadvisable; not infrequently we have heard it denounced by those uninstructed in its psychological bearings, but impressed by facts which have come to their knowledge. There are those, also, who, whilst they cannot deny the untoward occurrences observed, are not inclined like certain politicians, to "let the union slide," but further its consolidation, either positively, or by "a masterly inactivity."

We candidly believe that few would willingly help on the consummation of a matrimonial alliance if they knew that the least, even, of the evil results we have alluded to would happen. But, it may be said, they cannot absolutely *know* that this will be so: true—are they willing to run the risk? As in most grave questions, so in this, the test-appeal, after all, is to *self*; suppose the parties are our own kith and kin, and our opinion or advice is asked as to their union, they being nearly related—perhaps the son and daughter of brothers or of sisters? What is likely to be the verdict? The very least we should expect would be a strong hesitancy as to the sanction, in view of the possible, too often the certain, consequences. If the responsibility of friends is thus great in these cases, what is that of the physician? It is not a question of possibility of prevention, nor of expediency—the marriages may or may not take place, they may or may not be unfortunate in the way we have suggested; the point to which we would bring the matter is simply this, should the medical man be indifferent, and smilingly say, O! let them marry, &c., &c.; or should he at once lend the weight of his knowledge and influence against the step. The answer seems to us evident, and yet there is a supineness upon the subject which is truly marvelous. Blind impulse is allowed to guide in the matter, even in the face of an array of facts which should startle calm, sedate parents, even if it be powerless with headstrong and love-sick boys and girls.

It may be uncommon, or only a coincidence, but all the instances within

our own cognizance, of marriage between blood relations, have been signalized by unfortunate results for the children; and in this experience we are joined by many. It is true the number of cases known to us, personally, is comparatively very small, when the whole number of such marriages is considered. Others, too, have mentioned to us instances where nothing untoward has followed. All this may be and continue, but the risk is still in existence, and it is our opinion that freedom from ill results in the marriages of near relatives is the exception and not the rule. We need only to refer to undoubted sources for facts, An extended observation has enabled medical men to trace many serious affections and morbid processes, affecting both parents and children, very directly to consanguine marriage. Amongst other authorities Dr. Rilliet, of Geneva, has very lately given us a *resume* of the important results at whieh he has arrived, while prosecuting researches upon this interesting subject. At some future time he purposes publishing a full account of his investigations. We transcribe the summary given by him in *L'Union Medicale* of May 24th, 1856,whence it is quoted into the *British and Foreign Medico-Chirurgical Review*, for October, 1856.

"The lowering of the vital power, as a result of marriage between near relatives, is manifested by results varying in frequency, form and degree. The following is an enumeration of them in their logical order, though not in that of their relative frequency. 1. Absence of conception. 2. Delay of conception. 3. Imperfect conception (abortions). 4. Incomplete products of conception (monstrosities). 5. Children with imperfect physical and moral constitution. 6. Children especially liable to diseases of the nervous system, in the following order of frequency—epilepsy, imbecility or idiocy, deaf-dumbness, paralysis, various cerebral disorders. 7. Children predisposed to diseases connected with scrofulo-tubercular diathesis. 8. Children which die at an early age in larger proportion than those born under other conditions. 9. Children which if they live beyond early infancy, are less able than others to resist disease and death. The health of the family of the married persons, and of these individuals themselves, exercises a certain influence on the degree and kind of depression of the vital force in their children. It is probable that all the deviations from the laws just laid down are due to the health of the predecessors, as well as to the dynamic conditions in which the relatives are at the time of sexual intercourse. Thus it is incontestable—1. That all the children in a family may escape the effect of consanguinity, but this is rare. 2. That in one family some may be attacked, while others escape. 3. That the form of disease varies in those who are attacked. Thus they are not at *all* epileptic, deaf and dumb, paralytic, or scrofulous; but they are variously influenced. For example, there may be observed, in one family, an epileptic, an imbecile, a child only physically and morally retarded, and another who will succumb rapidly to a disease which any other child would have resisted. In another family, there will be two idiots or imbeciles, and two healthy children. In a third, there

will be one child with congenital paralysis, and several only scrofulous, &c. If certain families appear to entirely escape the action of consanguinity, it is to be feared that the direful effects will be manifested in succeeding generations, ending in the annihilation of the family."

Nothing which we could add, from any source, could be more positive and conclusive than the above statements. The writer goes on to refer to the laws of olden time for the prevention of marriage amongst relations. The Hebrew, Greek and Roman enactments are referred to. We can only say that, to our mind, the Mosaic restriction upon such marriages up to the third degree of relationship, aside from the divine wisdom which dictated it, showed in its results, happy effects on the nation. There are other Jewish observances worthy of adoption in respect to their hygienic influence. Two may be mentioned; viz., circumcision as a preventive of syphilitic infection, and the avoidance of pork and shell-fish as articles of diet. This, by the way. In the hope that the subject we have cursorily referred to may enlist the attention of the profession and the community, as being one of both individual and national importance, we commend them to Dr. Rilliet's volume, whenever it shall appear, and await it, with great interest, ourselves.—*Boston Medical and Surgical Journal.*

Ipecacuanha in Dysentery.

It is well known that ipecacuanha was first brought into use as a remedy by the remarkable success which attended its administration in dysentery; and that, for a long while afterward, its principal use was confined to this disease, and it was considered by many to be by far the most valuable remedy known. By degrees, however, as other and important remedies were introduced, this gradually fell into comparative disuse, and now it is not uncommon to read, in our works on practice, and in our medical journals, long lists on remedies for dysentery, without even any mention of this once celebrated article. Our convictions, founded on experience, not unfrequently lead us to the employment of old remedies in preference to new, and thus we have been able, in several instances, to cure this formidable disease by a substitution of the ipecac treatment for other means, under the use of which life had well-nigh been despaired of. Many years ago a young man came under our care, after a long and ineffectual course of treatment for dysentery, when nearly all hope of recovery had fled; and nearly every other remedy having been used, under the direction of able physicians, scarcely any resource remained but an experiment with this ancient remedy, which was made, the ipecac being given in very large quantities for several successive days, exclusive of all other medicine, when the disease subsided, and the patient was cured. We have used it frequently since, with excel-

lent effect, both in substance and decoction; but very recently a patient has recovered under this treatment, whose case is worthy of notice, as showing what large quantities of powdered ipecac the stomach will bear in a confirmed and obstinate case of this disease.

This was a case of several days continuance, resisting the remedial power of various appliances in common use in this disease. The continuance of the same plan of treatment, or any part of it, seemed to promise little benefit after the experiments already made, and we, therefore, determined to make a fair trial of the ipecac. We began by administering one drachm of powdered ipecac, which producing no nausea, or other perceptible effect, was followed by another drachm in half an hour. Two other one-drachm doses were given at intervals of one hour, before vomiting was produced, and then only to a slight extent. Soon afterward a feculent stool gave the patient temporary relief from the painful tenesmus with which he was suffering. The ipecac was continued in doses of one drachm each, prolonging the intervals as the nausea and vomiting indicated, until one ounce had been given. Afterward, as the stomach had become more and more impressionable, the doses were reduced to half a drachm each, with occasional prolongation of the intervals, until a full half-ounce more was given. Then, on account of the greater susceptibility of the stomach to its influence, the doses were further reduced to fifteen grains, which now caused greater nausea than one drachm in the beginning. The dysenteric symptoms gradually subsided under this treatment, and the patient recovered. No other medicine was used until the day after the dysenteric symptoms were relieved.—*Memphis Med. Recorder.*

Spender's Chalk Ointment in Ulcers of the Leg.—Dr. Patterson has collected 125 cases of chronic non-specific ulcers of the leg, in which, under this mode of treatment, the cure has been rapid and complete. The following formula he prefers: R. Cetæ preparatæ, lbiv.; adipis suilli, lbi.; olei olivæ, oz.iii. Having heated the oil and lard, add gradually the chalk, finely powdered.

The ointment and a bandage being once applied, it is left until the cicatrix forms and becomes firm.—*Edinburg Medical Journal.*

Mode of Testing the Translucency of Hydrocele.—As ordinarily employed by placing a candle on one side of the tumor, and excluding the passage of the light laterally by means of the hand, it is, at best, a clumsy proceeding, and liable to errors. I have found the stethoscope much more useful, as a means

of excluding the diffused light, and by applying the eye to its expanded bell-shaped portion—the ear piece being firmly placed upon the scrotum, held in a tense condition—we can even map out the state of the parts with tolerable accuracy, if the contained fluid be of ordinary character, and detect the condition of the testicle by the opacity it produces, especially when it occupies any unusual locality, as the front or sides of the scrotum, or is adherent from inflammation after previous tappings. We can employ either a lighted candle or bright sunlight, as our best means of obtaining the requisite illumination; but even in diffused daylight I have succeeded very well in the manner I mention.—Dr. W. Frazer, in *Dublin Hospital Gazette.*

Fistula Lachrymalis.—Tavignot thinks this disease results from a disagreement between the chemical properties of the tears, and the physiological condition of the mucous membrane; because it is found that the tears will not flow through the canal even when diluted unless a canula be introduced, which is better tolerated than the tears. He recommends that when the difficulty does not arise from scrofula, the orbital portion of the lachrymal gland be removed, as the palpebral granulus that remains will suffice for the secretion of lubricating mucus. If the cure is delayed iodine injection may be used. But we have found that these, with occasional snuffing of the vapor of iodine, will sometimes remove the disease without the use of the knife. Probably the relief is effected by restoring the secretions to a healthy condition.—*Memphis Med. Recorder.*

Etherization in Puerperal Convulsions.—Dr. Griscom reports to the Philadelphia College of Physicians a case of puerperal convulsions occurring in a corpulent young woman, pregnant with her second child. She was suffering under general anasarcous swelling, and experienced vertigo occasionally. While dressing her hair, she fell down in violent apoplectic convulsions. Her pulse was full and rapid, and being unable to bleed her, Dr. G. took sixteen ounces of blood from her head by cups, and the same quantity by leeches. There was no evidence of labor having begun. As the patient still remained unconscious, and the convulsions were recurring with fearful violence, chloroform was used as a rubefacient to the spine and epigastrium, and ether given by inhalation. After its exhibition the convulsions became less and less violent labor set in, and a living child was born. The mother recovered.—*Medical and Surgical Reporter.*

NEW PUBLICATIONS.

Obstetrics—The Science and the Art. By Charles D. Meigs, M. D., Professor of Midwifery and the Diseases of Women and Children, in Jefferson Medical College, at Philadelphia; lately one of the Physicians to the Lying-in department of the Pennsylvania Hospital ; Member of the Society of Swedish Physicians, at Stockholm ; Corresponding Member of the Hunterian Society, of London ; Member of the American Philosophical Society, of the Academy of Natural Sciences of Philadelphia, of the American Association, etc., etc. Third edition, revised, with one hundred and twenty-nine illustrations. Philadelphia, Blanchard & Lea, 1856.

To the practitioner, who has toiled for a quarter of a century, no less than to the junior member of our profession, it is refreshing to meet a production, that comes from a fountain of long continued experience and plenary professional learning. Nor is the like event of less interest to the student, just entering upon his professional career. The first will have the satisfaction af confirming or correcting many deductions, derived from facts and cases, that have fallen under his own notice, or doctrines, resulting from analogous processes of reasoning and founded upon similar phenomena and events. Aided, also, by the ratiocinations of the author, he may be prompted to extend what existed in his own mind, either as a mere impression or unproductive suggestion, into a progressive hypothesis, or a well constructed system of appropriately connected causes and resulting conclusions. He may find himself cheered, likewise, and encouraged to persevere in the thorny path of professional labor, by the consideration that another, at least, may have had the same difficulties to encounter, the same solicitude and

apprehension for the safety of a fellow-being, and the integrity of his own reputation, and that he has triumphed, through the same or quite analogous measures, and finally, rested securely on the substantial terra-firma of truth.

The last, will not less certainly, be convinced, at an early period in his progress, that he is not groping in darkness and searching his way, shrouded in uncertainty amidst shoals and quicksands ; on the contrary, that every effort he makes leads him on, with accelerated velocity, towards the goal he seeks, the unclouded effulgence of scientific light and demonstrated verity. Such are the advantages, in part, of the issue of books from sources of the kind above referred to, and such is the treatise under consideration. Addressing himself, especially to the student, the author has put forth his doctrines and precepts, as also his theories, with a definiteness and emphasis that cannot fail, if they be faithfully studied, to make them readily understood.

Differing, however, on important points, from a greater or less number of his predecessors, as well as distinguished cotemporaries, the student will, nevertheless, find sufficient of accepted truth, to constitute him, with honesty of purpose and a fair proportion of mechanical skill in manipulating, an accomplished practitioner of *obstetric medicine.*

Not only so, but, as already suggested, the man of experience will frequently meet, in the more controversial portions of the work, a suggestion, or receive a hint, that will aid him in mastering many of the obscure difficulties with which he may have to contend. While we regard Dr. Meigs' production, in the aggregate, as possessing extraordinary merit, we deem it proper to say, certain portions are incomparable. Among these, the following may be mentioned, viz : the chapter on abortion, that, on the use of anæsthetics, including his letter to Dr. Simpson, of Edinburgh, and those which treat respectively of "child-bed fever, and cyanosis neonatorum." The doctrine enunciated in the last, claimed by the writer as a discovery, if confirmed by the experience of others—and so far as it is known and has been tested, it seems to be confirmed—will, necessarily produce an important reformation, both in the prog-

nosis and treatment of the malady and tend to the preservation of infantile life.

The publishers have our thanks for the kindness bestowed, and we ardently hope the enthusiastic author may have the satisfaction of knowing that his efforts to advance the interests of *scientific medicine* are appreciated by his professional bethren.

Sold by Raymond & Selleck, in this city. K.

An Introduction to Practical Chemistry, including Analysis. By John E. Bowman, F. R. C. S., Professor of Practical Chemistry in King's College, London; author of a Handbook of Medical Chemistry, etc. Second American edition, from the second and revised London edition. Philadelphia, Blanchard & Lea, 1856.

The relation of Chemistry to the sciences, in general, and especially, of Analytical Chemistry, must ever render it an object of deep interest to the lover of philosophical research. If astronomy and mathematics have established the great principles, which govern the action of aggregate masses of matter on like aggregate masses, and instituted formulas, by which events, far remote in the future or equally remote, in the past, may be calculated with unerring certainty, and if such commanding results have enobled the genius and character of man, it is not less certain that chemistry has, by analysis and the aid of numbers, enlarged, immeasurably, the area of human knowledge, contributed to the interest and happiness, and equally enobled the genius and character of civilized man.

If the former can boast a Copernicus, a Kepler and a Newton, the latter, with no less of complacency and truth may present, to an admiring world, a Percival, a Black and a Davy. But we are to speak of the treaties before us. Our engagements have not allowed us to examine it with the degree of care we desired; but sufficiently, we hope, to offer an intelligent opinion respecting it. With a view to clearness and readiness of comprehension, on the part of the learner, the author has sought to explain, through well defined "chemical

symbols and equations," most, if not all, "the changes and decompositions," described throughout the work. In the further presentation of his plan, he has arranged the elementary substances, with their "symbols, atomic weights and the composition of a portion of the "compounds" in the tabular form, and in alphabetical order.

Then follow specific definitions of these symbols, and equations, and their significance, as also their readings, both individually and variously associated. There is, also, a modification in the type or impression of the symbolical expressions, in virtue of which, the reader is enabled, at a glance, to determine whether the materials mentioned, "are in the solid, the liquid or the gaseous form." The instructions to the student, in regard to a methodical taking of notes of all his manipulations, simplicity and precision, in experimenting and extraordinary neatness, in order to accuracy of results, all evince the accomplished scholar and the experienced manipulator. Another appreciable feature of Dr. Bowman's work, is found in the symplicity and economy of his apparatus. On this subject, he remarks, "when thrown upon his resources, the student will often find it of the utmost value to be able to substitute, in default of more perfect apparatus, the common things used in domestic life, which are to be found in every house, such as glasses, plates, cups, sauce pans, &c. Again, "He may rest assured that it is no disadvantage to be thus compelled to devise and construct for himself, rude and extemporaneous forms of apparatus, and if he should require encouragement to persevere in spite of the scantiness of his resources, he need only be reminded that, the majority of those whose names shine brightest in the annals of science, have laid the groundwork of their future eminence, while placed under the most unfavorable circumstances. So it was with the great Davy; so with Dalton, with Scheele, Faraday, Dumas, Leibig, and many others, almost equally illustrious." With regard to the practical application of principles in chemistry, to purposes of analysis, as detailed in the body of the work, it is unnecessary to speak further than to say that the fundamental doctrines of the science are steadily adhered to, and the experiments are so de-

vised and executed as to ensure the most definite results. Considered in the aggregate, we regard the production of Dr. Bowman as a valuable contribution to chemical science, and would cordially recommend it to all who seek accurate information, and neatness and facility of manipulation, in that interesting and important department.

To be found at Raymond & Selleck's, in this city. K.

Sterility Remedied.—A correspondent of the New Orleans News and Hospital Gazette, directed a negro woman to apply an infant to her breasts, with a view to cure her of sterility. The prescription was followed for only four successive days, during which time she conceived, and at the end of full term was delivered of a fine child. This is another evidence of the remedial use to be made of the close sympathy existing between the mammæ and the uterus and ovaries. Wishing to avail ourselves of this means for the relief of amenorrhœa, lately, we used the gum elastic cup as very convenient of application, and with good effect. This was done after sinapisms had failed.—*Memphis Med. Recorder.*

Collodion for Sore Nipples.—Dr. Simpson says: "in two cases I lately united the edges of the fissures, and covered them over with the solution of gun-cotton, making the layer pretty strong. It acted successfully, maintaining the edges so firmly together that they were not again re-opened by the suction of the infant. The gun-cotton dressing is not, like other dressing, affected by the moisture of the child's mouth; and at the same time, by securing rest to the part, it allows complete adhesion and cicatrization speedily to take place. It is improved by the addition of a little olive oil."—*Memphis Med. Recorder.*

EDITORIAL AND MISCELLANY.

Solecism in Medical Literature Illustrated.

Ignorance wherever met with, is a mark of degradation, and every unfortunate individual of our race, who wears the disfigurement is an object that appeals either to our sympathy, or excites only derision. In a land of superstition, bigotry and barbarism, where cultivation of the intellect would lead to a subversion of the controlling power of kingdoms, it begets the most degraded forms of human slavery; it is the indispensable element of submissive abject servitude; under such dominion it justly calls forth commiseration and the generous impulses of benevolence.

In a land of civilization where the facilities for mental culture are almost as free as the light of Heaven, where education is the passport to respectability, influence and power, the uncultivated mind, by force of contrast, exhibits its worst deformities; with the face of unblushing impudence, or with the supercilious arrogance of self-sufficiency, it is found among all ranks and conditions of men, but in whatever capacity or relation apparent,it always preserves its identity. The almost omnipotent influence of wealth and superficial accomplishments may mask many of its unsightly features, but they never can altogether hide its "cloven foot." When observed in the lower walks of life, or among those whom poverty or misfortune has deprived of advantages for mental improvement, a charitable degree of allowance is made, and the accompanying good qualities of both head and heart are duly weighed and appreciated. But when it borrows the livery of science, and pays servile obedience for notoriety and position, it justly merits the

censure of withering contempt. It offers itself as a plastic constituent, that can be moulded to suit the machinery of organizations, by means of which men of inferior mental worth can be elevated to places of distinction and honor. Hence it becomes the opprobrium—nay, the most indelible stigma of the medical profession.

Minds not yet expanded by a knowledge of English grammar, small enough to make an easy exit from the key-hole of our Medical Colleges, are to be found sharing the first honors in the gift of our profession. They have been galvanized with the verbiage and technicality of Medical Science, and like other counterfeits, for a time, pass for the true coin. It were bad enough if we had only to recognize them in honorable competition, or in the various turns of our social relations, but when as members of a learned profession, we are made to blush on account of their ignorant blunders recorded in our medical literature, we need not wonder at the success of quackery. Before they have reached the culminating point of their selfish ambition, the "lion's skin" is in part removed, and the shadow of their *acoustic appendages* is thrown upon the disc of circulating intelligence. For example: in one of our November exchanges (and for the sake of those on our list which we value, it shall be so indicated as not to be mistaken) we find the report of a case of "strangulated femoral hernia;" and when we bear in mind that its author is not only a sub-editor of the Journal in which it appears, but even a sub-officer of the American Medical Association, the few extracts which we propose to make will, with the aid of italics, be of more significant import.

The writer first relates with *characteristic clearness*, the early history of the case, as follows:

"Fifteen years previous Mrs. E. while lifting her oldest child, a heavy boy of three years of age, from the floor, felt something give way in her right groin *which* occasioned at the time much pain. Very soon a tumor appeared of the size of her knuckle, as she described it. After the application of cold to the part, the pain left her, but the tumor remained. She felt no further inconvenience till seven years ago, when after lifting she again had a return of the *pa'n* complicated *with a strangulation of the intestines. This* was aga'n reduced by the application of cold and a plaster, which had been recommended to her as a sure cure for rupture," * * * * *

Does he mean to say that *all* the *intestines* were strangulated? If so, we can have no difficulty in accounting for the pain! But *what* was reduced? The *tumor*, *pain*, or *intestines?* We pause for a reply.

"On the 22d of the month, being at this time the mother of a large family *and of a corpulent habit*, she had a return of her hernia." * * *

Being the mother "of a corpulent habit" would certainly add a new complication to the case, as well as a new offspring to the category of the abnormal products of gestation!!

* * * * "At the request of Dr. P. I again attended the patient with *himself* and Dr. B., when it was decided *to immediately operate.*

* * * * The stricture was then divided which consisted of a portion of Gimbernat's Ligament, and the *gut immediately* returned, with *immediate* relief to the patient. The tumor was then examined and found to be one of the *ovaria.*"

From the previous history of the case, we learn that about seven years ago, she had "a strangulation of the *intestines,*" but an operation has revealed the fact, that at last it had become a strangulation of the "*gut*" seriously complicated!

* * * The patient being at this time in a conscious state expressed her desire of evacuating the bowels, which *event* took place freely *after the dressing of the wound*, they not having been moved for a week previous."

A solemn "*event*" !! But what was it, the *desire* or the *fact* of "evacuating the bowels" ? If the latter, was it the result of "the *dressing of the wound?*

* * * * (Fourth day). "She complains of a little weakness of the right side, *but thinks it will go away in the course of a few days.*"

Indeed! This must have been intended as a *psychological* contribution to science.. It ought therefore to be preserved!

* * * * * * * * * * * * *

"The above case is particularly interesting from its complication *(corpulent habit).* The ovary must have been *down* for the last seven years, if not longer; evidently it must have preceded *that* of the intestine.

"Preceded" *what* of the intestine?

"This organ was about three times its natural size, its free or convex border presenting in its convexity, *was the knuckle of intestine.*"

Somewhat "*mixed,*" but if the reader will be good enough to throw in a paragraph of his own to supply the elipsis, he will make a *liberal* translation. The *probable* meaning is that the convex border of the tumor, was in fact, what *appeared to be* a knuckle of intestine.

"As we have mentioned before, the ovary was adherent to the surrounding tissues, *therefore demonstrating* the fact that it must have been in that situation *for some time.*"

Possible! About how long, should you think? Seven years? Or fifteen!

"We have examined cursorily, the *literature of Hernia*, as far as we could obtain it, and although we have found almost everything else mentioned as complicating Hernia, whether femoral or inguinal, we have not found the *ovaria* of the number enumerated."

May the God of "*literature*," be appeased!

By inference then, the writer would have us regard him as the *probable* discoverer of a new complication in the phenomena of Hernia; but unfortunately for his vanity, his examination of the literature *was curse*-ory.

A descent of the ovarium complicating Hernia has been so frequently met with, and treated of by authors, both of the obstetric and surgical literature of Hernia, as to give the accident a place among *common events.* For the edification of the writer therefore, we will point him to some of the authors who, to say the least, have a prior claim to this discovery.

Turn for example. to page 1066, of Copland's Dictionary of Medicine, and read the following, under the head of "Displacement and Hernia of the Ovarium."

"Displacement of the Ovarium is not *infrequently* met with, to the extent of constituting a hernia. The ovarium may protrude through,1st the *inguinal ring*, the most common form of ovarian hernia; 2*nd*, the *crural canal*; 3*rd*, Ischiatic foramen, 4*th*, Umbilical ring; 5*th*, any accidental opening in the abdominal parieties;6*th*, into the Vagina."

Turn also to "Cruveilhiers Anatomy," page 462,and then to the Cyclopædia of Practical Medicine, Vol. 3, page 442, on which is recorded Mr. Pott's operation for inguinal hernia,complicated by a descent of the ovarium. But we have neither the time, nor inclination to search the records for additional authority on this subject, or to hunt up cases that have been reported in our periodical literature.

For, if we take the illiterate phraseology of the report before us, as the basis for practical deduction, we are led to doubt, *not whether* the writer has improved another "*permit to operate*," but whether he is competent to distinguish an ovarium, from an adventitious enlargement of a *stray inguinal gland*,or a strangula-

ted inguinal hernia *from a hydrocele.* The ovaria in their normal state, are about the size of a large almond, but this one in its growth had reached to "about the size of a hen's egg." What then were the conclusive evidences that it was an ovarium? Were any of its anatomical characteristics preserved? Were any traces of the Grääfian Vesicles discovered? With regard to these questions, or any others respecting its pathological appearance,the writer has, for some reason,maintained profound silence, leaving us to wonder why a careful dissection of the tumor does not appear in *a lithograph!* But if we must admit, that it was an ovarium degenerated by abnormal processes, and if there is any value attached to the representations of the case, ought they not to be rendered according to *grammatical construction,* and left for the statistical record of Hernia?

When gross inaccuracies in our medical literature point only to the deficiencies of a *primary* education, what must be the legitimate inference respecting an assumed knowledge of the elementary branches of Medical science? If such is the syntax, what *must* be the surgery!?

A production, which commits barbarous outrages upon the "King's English," from a *junior editor,* is certainly unpardonable and reflects great discredit upon his editorial associates; for it leads to the rational inference that they too are incompetent to use language with propriety, or that they are culpably remiss in the exercise of their supervision and control of manuscripts offered for publication. This report with the former productions of the writer, are quite sufficient to establish his literary reputation, and for the sake of the respectability and position of his senior associates, as well as the honor of the profession, pray spare us from another such infliction, and our literature from solecism. R.

Correction.—By a mistake of the compositor, the advertisement of the third edition of Gunning S. Bedford's work upon "Diseases of Women and Children," was inserted in our advertising sheet, instead of his announcement of the *fourth edition,* which will be found in this number.

ANN ARBOR, Dec. 1, 1856.

MR. EDITOR :—I cheerfully comply with your solicitation to become the medium of occasional communication of items connected with the medical department of our University. A "free and easy" correspondence from an impartial observer of passing events, sayings and doings within our "temple dedicated to the God of progressive medical science," will be read with interest by all who have here received an introduction to an honorable profession. The names of many such, I am aware, are to be found on your list of subscribers, and I have no doubt the number will be greatly increased.

Although former classes were composed of those students who are doing credit to themselves and honor to the profession, and in number would compare favorably with any other medical school in the country, yet the present class will, by far, exceed in numbers any previous one, and, by their attainments, promise as much as any, for the school and the profession.

The graduating class will number about thirty-five, and they all manifest a determination to make the profession they have chosen a business of life, and if we may judge from appearances, will not be content with a superficial knowledge of the elementary branches of medical science. I shall be able to abstract from the notes of Professor Gunn's Surgical Clinic some reports of cases which possess no inconsiderable interest. Although our facilities for clinical advantages are not what they should be, yet such opportunities as we have for practical demonstrations in the treatment of disease before the class, are well improved. The truth of this assertion I shall endeavor to verify in your next number. Yours, MEDICUS.

Dr. Gordon's Card.—To the Medical Profession and Scientific Observers.

The undersigned having been appointed, at the late meeting of the American Medical Association, Chairman of the Committee on the Etiology and Pathology of Epidemic Cholera, respectfully solicits Etiological, Pathological and Historical data pertaining to disease, from the Medical profession; and Meteorological data from any person who may have them.

As a primary examination in investigating the cause of Asiatic Cholera, and its mode of travel, he wishes to be able to compare Meteorological data obtained when the disease was raging in any given locality, with those which were obtained when the disease did not prevail.

To make this comparison most complete, a full set of Barometrical, Thermometrical, Hygrometrical, Ozonometrical tables, with prevailing winds—and Electrical phenomena as far as obtainable—for a series of years, embracing those of health and disease, and extending over a large teritory, are needed; but where full tables are not obtainable, partial ones, or reports, will be thankfully received, if the observations are accurate.

As Hygrometrical observations are extremely rare in the United States, the undersigned hopes that each person, who has any which may be of value in the present investigation, will forward them to his address, or inform him of their existence, and how they may be made available.

It is also hoped that every person properly prepared to keep Meteorological Registers, will spare no pains to make them as perfect as possible, and not fail to embrace Hygrometrical observations in their tables.

Tables now forming may be of real service to the Committee before the time expires for which it was appointed.

All data received prior to March 15th, 1859, will receive the attention of the Convention, and due credit be given in every instance for valuable information.

The subjects of investigation are of such vast interest to mankind, it is hoped the present request will elicit the hearty co-operation of the Medical Profession, and any other persons who may have, or shall hereafter collect matter of the kind requested.

It would seem that he should not hope in vain, when it is considered that Cholera is a disease, which knows no political bonnds, and frequently appears to regard neither geographical lines or sanitary cordons, and has already destroyed nearly, if not altogether, one hundred millions (100,000,000) of the earth's inhabitants.

Thus far, all with whom the Chairman has corresponded have most promptly proffered any assistance in their power, and at the same time expressed their warmest sympathy and regard for the investigation; but believing those with whom he is unacquainted may have data of the kind sought, he takes the present mode of presenting his wishes; hoping they may be complied with by all who are possessed of such data, and feel an interest in man's emancipation from disease.

Medical Journals, Literary Magazines, and Newspapers, friendly to the great interests of humanity and Medical Science, will confer a favor upon the Committee—and, it is hoped, upon the world—by inserting the above in their columns. T. Winslow Gordon, M. D.

Georgetown, Brown County, O., Oct., 1856.

We very cheerfully give place to the Circular of our friend, Dr. Gordon, and we trust the Profession everywhere will respond to its solicitation. Dr. G. has been a zealous student of Cholera and its associate phenomena for several years, and we sincerely hope he will be successful in bringing order out of the chaos which thus far seems to envelop the true nature and true management of this scourge."—*Medical Observer.*

"The Cincinnati Medical Observer."

To this journal we owe an apology, and to none would we be more willing to make honorable amends. It charges us with being "independent," inasuch as it has not received our journal in exchange, excepting two or three numbers. We acknowledge the fault, and at the same time beg to assure our cotemporary *Observer* that the sin was not willful, but accidental. In making a transfer of our exchange list, it was, by an oversight, left upon the old list. We have corrected the error, and if the editors will indicate the back numbers not received, we shall take pleasure in supplying them.

The *"Medical Observer"* has appeared with great regularity on the first of each month—well stored with entertaining and valuable matter. The present number closes the volume, and we are happy to learn from its benediction, that its labors in contributing to medical literature, have met with marked success. It is our cordial hope, that it may receive a patronage commensurate with the talent and energy expended upon its pages. R.

Treatment of Menorrhagia.

Dr. Thomas A. Mitchell of Dekalb, Crawford Co., Ohio, has published in the "Medical Observer" a favorite prescription and expresses a hope that the profession will give it a trial in the treatment of Menorrhagia.

(Use officinal preparations).

℞ Tinct. Gum Kimo, ℥ij.
" Cort. Cinnamon, ℥j.
Pulv. Sulph. Cupri., ℥j.
M. Ft. Solution.

Dose ten drops of the solution three times a day in a little sweetened water. Increase or diminish the quantity of the Sulph. Cupri., according to the urgency of the symptoms or as the patient will tolerate.

Monthly Report of Prevailing Disease.

Instead of the reports of prevailing diseases which were promised by many of our *truthful* subscribers, in different parts of the State, we have received only apologies, assuring us that they were "not seeing enough of disease to make even a tolerable report." The only epidemic that could be found was the fever of *politics*, and this was prevailing rather more among doctors than any other class.

We have many assurances that their former reports were very acceptable to our readers, and we sincerely hope that, as political excitement has subsided, our contributors will remember this department of our journal.

A New Book and News Depot.

Messrs. Forrest & Holmes desire to inform our readers, that among their large stock of periodical literature can be found Braithewaite's Retrospect, London Lancet, Westminister Review, and Scalpel.

Their facilities will enable them also to fill orders for any other medical works to be obtained through the publishing house of STRINGER AND TOWNSDND, N. Y., or at Philadelphia, with great dispatch.

We hope this effort to supply the wants of the profession will reward their enterprise and industry, with a well deserved patronage.

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"We hail the advent of such a work, abounding in practical matter of the deepest interest, and illustrated by principles and laws ordained by nature. Nor can we refrain from expressing our surprise and gratification at finding the book so remarkably exempt from the superficial views that abound in the great thoroughfare of medicine. The rapid sale of this work we believe to be unprecedented in the history of medical literature in this country, which must be highly gratifying to the author, showing, as it does, the degree of estimation placed upon his labors by the medical public"—*N. Y. Jour. of Med. and the Collateral Sciences.*

"We are quite sure that the work will be a welcome addition to professional libraries in Great Britain as well as America."—*Brit. and For. Med. Chir. Review.*

"We think this the most valuable work on the subject ever presented to the profession. We have perused every page of the book with interest, and speak, therefore, from personal knowledge."—*Cincinnati Med. Jour.*

"A work of great practical interest—one well calculated to interest and instruct the busy practitioner; it points out to him the most modern therapeutical agents. and their method of administration; and, above all, gives beautiful and satisfactory explanation, physiologically, of the symptoms of disease. This latter quality is a great merit of the book. As a faithful representation of the daily labors and duties of a physician of our day, and as an accurate delineation of the diseases of women and children, it is well deserving of our praise."—*Virginia Med. & Sur. Jour.*

"Dr. Bedford's book contains much useful and practical information, instructive alike to pupil and physician; the number of subjects which receive consideration in the volume is very great; indeed, scarcely any disease properly included in the denomination of the work is left unnoticed."—*Dublin Quarterly Jour. of Med. Science.*

"We have been both pleased and instructed by a perusal of the book, and confidently recommend it, therefore, to the profession, as an excellent repertorium of Clinical medicine. The eminently practical ideas of the author, clothed in simple and perspicuous language, are delivered in quite an attractive affable, and off-hand manner."—*Philadelphia Med. Examiner.*

"Professor Bedford's book is a good one. We like it, for we can digest a dinner over it without going to sleep, and that is more than we can say of most medical books.—*New Jersey Med. Reporter.*

"The working men in America are always on the look out for the new lights rising over the old world, and they often too hastily adopt as the pure gold of science, the crude lucrubrations which must find place with more valuable matter in the weekly medical press. But this observation does not apply to our author, who is creditably known by other works, and in the one before us shows himself to be a judicious physician, anxious alike for the good of his patients and of his pupils; one who has acquired the art of teaching how to get at the characteristics of disease, and how to drag at the chain of effects, until the mind grasps the first link in the chain."—*Rankin's Half-Yearly Abstract of the Med. Sciences.*

"We have said, on former occasions, that the man who will bring forward *clinical* or practical instruction to bear upon the medical teachings of our country, will be immortalized. We want practical observations—fresh from the bedside. Dr. Bedford's volume is drawn from an extensive clinic, founded by him in the University of New York, and is fortified by much reading and research. This is a good book, and the profession owes Dr. Bedford hearty thanks for the labor he has bestowed upon it."——*Philadelphia Med. and Surgical Journal.*

"The work before us is eminently practical and therefore valuable as a contribution to medical knowledge. Prof. Bedford's extensive opportunities have enabled him thus to bring together a large number of the most interesting cases of female and infautile affections, and to indicate his views of their treatment. In the accomplishment of the task, the author has evinced a degree of discernment which will, doubtless, add materially to his already extended reputation."—*Southern Med. and Surg. Journal, Augusta, Georgia*

"No one can read this book without becoming convinced that it contains much valuable instruction, and is the result of a large experience in this speciality.—*New Hampshire Jour. of Med.*

"The work contains graphic descriptions of the diseases of women and children, with judicious advice as to treatment."—*Boston Med. and Surg Jour.*

"Many important facts are forcibly impressed, and the author's luminous exhortations even on subjects comparatively insignificant in themselves, are calculated to impress correct rules of practice."—*Western Lancet.*

"This book, in its detail of the various forms of disease occurring among women and children, will be found a counterpart of almost every case which the physician is called upon to treat. It has received, most deservedly, the highest commendations from the medical press, both of our own country and Europe. It should be in the library of every practitioner."—*Monthly Review of Medicine and Surgery, Detroit.*

"We very cheerfully recommend this work to our readers, as being rich and full with practical suggestions in the treatmont of disease at the bed-side; it will be a very pleasant source of reference for physicians in the hurry and press of full practice."—*Cincinnati Med. Observer.*

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MONTHLY REVIEW.

VOL. II. JANUARY, 1857. NO. 5.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links Connecting the Vegetable and Animal Kingdoms.—Continued. By HENRY GOADBY, M. D., F. L. S.

[In consequence of the carelessness of the pressman, two figures in the last number were not sufficiently printed to be legible. As soon as the error was discovered, correction was made, but, unfortunately, the bulk of the issue was already printed. These figures are 111 and 112, showing the pigment cells of the human choroid, and the like structure in the choroid of the Frog.]

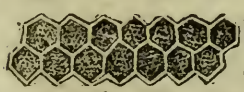


Fig. 111.

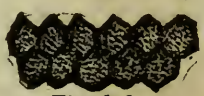


Fig. 112.

The singular resemblance of the external aspect of the vascular system of plants, and the respiratory organs of certain animals amongst the Articulata, for this structure is by no means confined to insects, is maintained to an extent that appears almost incredible. In manipulating on such delicate tissues it is easy to understand that they are liable to some derangement of their form; the most common accident is to disturb the symmetrical arrangement of the spiral filament by pulling it out—thus demonstrating the elasticity of the spiral fibre in both Kingdoms.

In the Vegetable Kingdom the spiral vessel frequently tears out in the form of spiral *bands*, as shown in fig. 115, which represents a distorted spiral vessel of Canna bicolor ; at other times the spiral filament unwinds itself as a *single thread*, such as is represented in a spiral vessel of Deutzia scabra, represented at fig. 116.

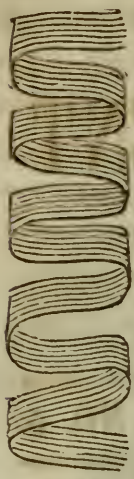
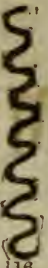


Fig. 115.



116.

We intended to illustrate the same tendency in the kindred tissue in the Animal Kiugdom (tracheæ of insects, &c.,) but our artist very properly reminded us that such figures were so identical with those above referred to, as to be quite superogatory—a sentiment in which we coincided. Suffice it, that our cabinet contains numerous examples of displacement of the spirally coiled filament in insects, centipedes, &c., sometimes exhibiting only a single delicate thread, as in Deutzia, and sometimes tearing in the form of spiral bands.

So perfectly do these tissues agree in every phase in which they can be examined, that they require the closest scrutiny by the microscope, and thorough education to detect a point of difference, or to define one tissue from the other.

Another very striking point of resemblence in the two kingdoms is in relation to circulation of the fluids. In his "Vegetable Kingdom," Dr. Lindley informs us that the Abbé Corti, of Lucca, published some remarkable observations upon the circulation of fluid in some aquatic plants, in the year 1774, and that these observations were subsequently confirmed by Treviranus, in the year 1817.

Still later, the celebrated Amici, professor at Modena, published a memoir in the "*Transactions of the Italian Society*," on the same subject, which was shortly succeeded by another memoir, containing further and confirmatory observations in relation to it.

Since the publication of these papers, the subject has been expressly examined in England, by Mr. Solly, the late Mr. Slack, and especially by Mr. Cornelius Varley.

The latter gentleman has prosecuted inquiries in this direction with more success than his contemporaries, and has published his observations and discoveries in the *Transactions of the Society of Arts*, and in the *Transactions of the Microscopical Society*. We deem this subject so very interesting, and instructive, especially in relation to the comparison between the structure and vital processes of plants and animals, that we shall quote Mr. Varley's papers to some extent, as they embody all that we have ourself seen, times and oft, but transcend our observations in respect of the discoveries he has made.

Mr. Varley commenced his observations twenty-five years ago, on the *Chara vulgaris*. We may here premise that all the early observations on the circulation in plants were made on some species of *Chara*. In this, as in other enquiries which require the aid of the miscroscope, discovery has kept pace with the *advancement or improvement* of that instrument. In Chara, the circulation can be readily seen by (comparatively) *low power*, of either the *single* or compound microscope. Thus, when Mr. Holland perfected the *single* microscope by the invention of *doublet* and *triplet* lenses, other plants were discovered to possess the same phenomena in certainly the most delicate part of their structure—the hairs. But we shall have occasion to demonstrate this hereafter.

The *Chara vulgaris* is found in either stagnant, salt, or fresh water, always submerged, and yielding a singularly rank, disagreeable fœtid odor ; its color is a darkish green, the stem branched, and surrounded here and there with whorls of smaller branches, usually nine in number ; this is represented of the natural size in fig. 117, and a magnified view of it at fig. 118.

From the centre of each whorl a smaller branch is given off, and wherever this takes place some very delicate filaments, called roots, are found to grow from the opposite side, as shewn in the figure. The main tube is covered throughout its entire length with eighteen smaller tubes, shewn at *a*, *a*, fig. 118, and is thickly coated with carbonate of lime, which renders the stem opake and brittle.

Nitella, a genus belonging to the same family as Chara, of which there are many species, exhibits the circulation very beautifully ; amongst these are the *N. hyalina*, and *N. flexilis;* the stem of these plants consists of a single transparent diaphonous tube of a delicate green, with transverse joints. In Nitella, the circulation may readily be seen without any previous preparation, but in *Chara vulgaris*, the stem will require to be freed from the carbonate of lime with which its outer surface is encumbered ere the circulation can be rendered visible.

Fig. 117.

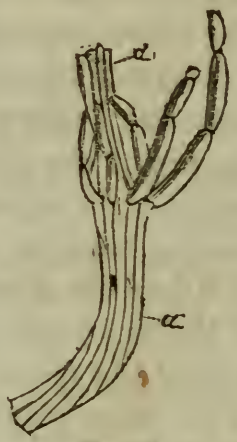


Fig. 118.

We have not succeeded in finding either *Chara vulgaris* or *C. translucens* in this country, although we believe that they both abound in certain localities. During our residence in England, our observations were chiefly made on *C. translucens*, which, although not so delicately transparent as *Nitella*, is yet sufficiently so for all the purposes of microscopical examination. We had the good fortune to find *Nitella hyalina* in great abundance in a shallow ditch on the lake side of the cemetery at Chicago, which remained in a healthy and flourishing condition so long as we remained in that city ; but it is very tender, and not by any means well adapted for traveling, consequently it pined when we adjourned to Milwaukee, where, shortly after our arrival, it died.

A portion of the stem of *Nitella flexilis* is shewn of the natural size at fig. 119. Comparaing this with Chara vulgaris, the difference is apparent; the joints are more delicate, and there is no outer covering of lime or small tubes; its extremely *diaphonous* character cannot be represented. The upper

Fig. 119.

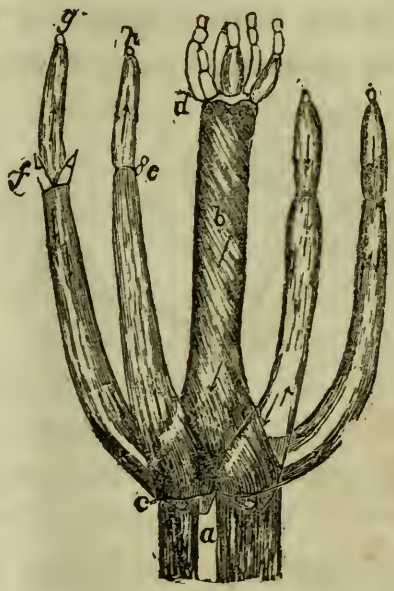


Fig. 120.

Fig. 119.—Stem and branches of natural size; *a*, *b*, *c*, *d*, four verticils of branches issuing from the stem; *e*, *f*, sub-divisions of the branches.

Fig. 120.—Portion of the stem and branches magnified; *a*, *b*, joints of stem; *c*, *d*, verticils; *e*, *f*, new cells sprouting from the sides of the branches; *g*, *h*, new cells sprouting at the extremities of the branches.

part of the stem, highly magnified is shewn at fig. 120. The arrows indicate the direction of the movement, and the letters *a*, *a*, the colorless division of the joints which separate the ascending and descending currents; the circulation may be seen in all parts of the plant, even to the young leaves at the top.

Subsequently to the discovery of circulation in Chara, botanists and microscopists turned their attention to other plants, with a view to ascertain if they also represented the like phenomena. In the forty-ninth volume of the *Transactions of the Society of Arts*, Mr. Slack gave an admirable account of circulation which he had discovered in the *Hydrocharis morsus*

ranæ, or *Frog-bit*, an aquatic plant very common in England, in streams and ditches.

This plant is also one which we do not remember to have seen in this country, and therefore append a portrait of it, seen of its natural size, and beside it is a magnified representation of a portion of it. Frog-bit, to a casual observer, appears to be a superior specimen of Duck-weed—*Lemna major*—in reality it is a distinct species of plant. Fig. 121, *a*, represents the plant of natural size ; *b*, represents the leaf buds surround-

Fig 121.

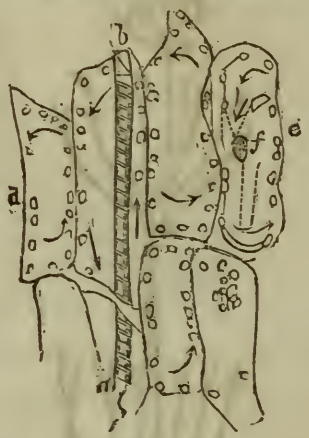


Fig. 122.

ing which are very transparent scales, shewn at *c*,—it is in these that the circulation may be seen. Place a scale upon a slip of glass, cover it with water, and upon it place a thin piece of glass, submit it to a magnifying power of two hundred diameters, and an appearance will present itself such as represented in fig. 122.

Flattened cells of the cuticle are seen at *d*, *e*, *f*, and a spira. vessel at *a*, *b*. Each cell possesses a series of green globules, moving round, at a variable rate of speed, in the direction indicated by the arrows.

In some of the cells, a large transparent globule, or *nucleus* is seen, as at *f;* this also occasionally circulates with the smaller corpuscles.

Sections of the *stem* of this plant also shew a like circulation. Immediately after making a section the circulation is benumbed, or deadened for a time ; but if it be allowed to remain in the water, undisturbed for a short time, it will ecover, and the circulation proceed as vigorously as formerly.

In the year 1828, Dr. Robert Brown discovered circulation in the jointed hair of Tradescantia virginica, found on the filament of the anther. Subsequently, Mr. Slack examined and described the same phenomenon, and gave a beautiful magnified figure, which we copy, 123. The hair consists of three delicate elongated cells, shown at *b*, *c*, *d*, which rest upon a broader, shorter cell, at *a*, which springs from the flattened cells of the cuticle of the calyx to which it is attached. In all the elongated cells, *a*, *b*, *c*, except *d*, the circulation may be seen with a power of from two to four hundred diameters, but in *d*, it can only occasionally be seen. Each cell has its large *nucleus* and its accompanying small globules, as in other plants; some times many currents are seen in the same cell. Mr. Slack observes, "throughout the plant, circulation may be shewn; in the petal even when entire, and in all sections made of the stem and leaves."

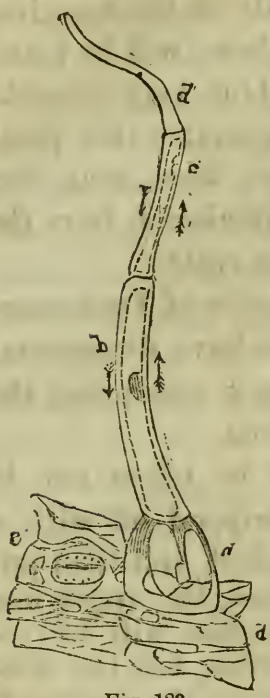


Fig. 123.

By means of the beautiful triplets, first made by Mr. Holland, he succeeded in discovering circulation in the hairs of Groundsel *Senecio vulgaris;* the movement of the globules in this plant, is the same as in Tradescantia, but much more minute; it cannot be seen with *less* power than four hundred diameters.

This continent produces, in immense abundance, a plant especially dear to the microscopist—*Vallisneria spiralis*; it is also found in the south of Europe, and in the East Indies. We have seen it in great quantity in the Erie Canal, where it presents a luxurious growth of a long grass. The circulation of Vallisneria is by far the most beautiful yet furnished by the vegetable kingdom as seen by the microscope. Some manipulation is necessary to see circulation in this plant; a sharp knife, with its back slightly elevated, should be passed along the leaf, so that a thin slice may be cut from it.

Place this under the microscope, when a number of oblong

cells may be seen, more or less filled with green granules, which will be found steadily and constantly circulating around the walls of the cell. If the slice be too thin, the cuticular cells, only, will be seen, and although filled with green granules, circulation is rarely visible. The section, to be good, should include the *centre* of the leaf, when numerous elongated colorless cells will be seen, with the green granules only on the margins, and these in active motion ; accompanying these, will be found large, and more or less transparent nuclei. One very remarkable fact remains to be noticed, and which separates this plant from all others in which circulation has yet been seen, viz: that in two adjacent cells, one will exhibit circulation from the *right to the left*—the other, from the *left to the right.*

We have alluded to the circulation in *the hairs* of Tradescantia; modern improvements in the miscroscope have demonstrated the fact that *the hairs of all plants*, not excepting the stately forest tree, exhibit the same phenomena.

In removing these hairs, great care must be taken not to wound them in any way ; they should be stripped off with a portion of tha cuticle to which they are attached, and then put in a drop of water, between two plates of glass, the upper one being *very thin.* Generally, an *eighth* object glass will be required, although occasionally a *fourth* will suffice, but the achromatic light, carefully adjusted, must be *invariably* employed.

That which we have called *circulation* throughout this article, is now known to the botanist as *cyclosis*, or *rotation*, and is presumed to be a motion of the *particles of chlorophyll*, and not a circulation of the sap.

In examining the circulation of the blood, as shown by the microscope, in a number of animals, we also perceive a circulation of only *solid particles;* in them, we venture to assume the presence of a *fluid* (the *liquor sanguinis*) which, although the highest power of the microscope fails to reveal, *we know to be present.*

How could the solid corpuscles pass through the vessels, did they *not float in a fluid?* We believe that although invisible, the masses of chlorophyll as much *float in a transparent fluid, or sap*, as the corpuscles of blood in the liquor sanguinis, and if such be the case, it should be regarded as a *veritable circulation*, and we hence fully establish a most important "link of connection."

To be Continued.

ARTICLE II.—On the Structure and Functions of Insects. Continued. By HENRY GOADBY, M. D., F. L. S.

We have directed attention to the excellent development of the bones, four in number, composing the *metanotum* of Dyticus, these are by name, the

Præscutum,
Scutum,
Scutellum, and
Postscutellum.

The præscutum forms the *anterior deflected margin* of the segments respectively ; in the *mesonotum* it becomes the *prophragma*, and in the *metanotum* the *mesophragma* ; the *scutum* is the disc of each dorsal plate; the *scutellum* is the posterior margin ; and the *postscutellum* is the *posterior deflected margin.* In the *mesonotum* it sometimes forms the mesophragma, and in the metanotum it becomes the metaphragma.

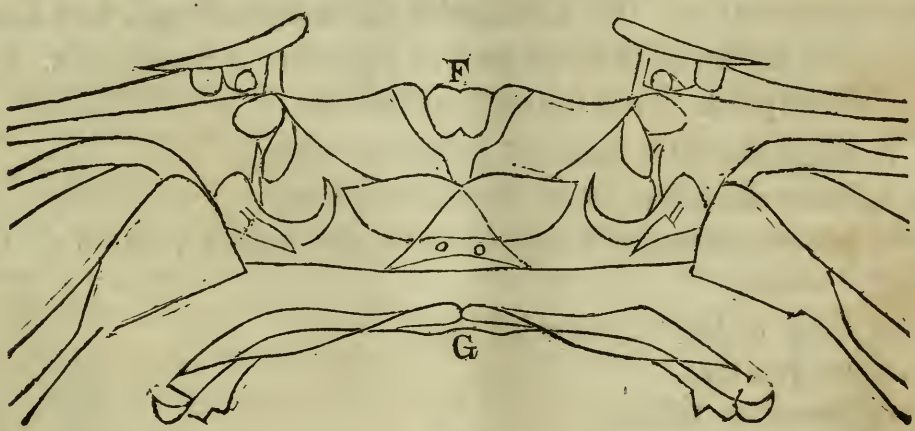


Fig. 7.

In Dyticus, as before observed, this latter bond, the post-scutellum, is remarkably well developed, so much so that it became easy to remove it by dissection, and this was desirable to show the great beauty and perfection of its form. In our preparation of the entire skeleton of Dyticus, we placed this bone immediately above the dorso-abdominal plates, which it connects to the metathorax, but in the figure of it here given, we have preferred to restore it to its position in alliance with the bones of the metanotum—it is shown at G, figure 7.

It has already been said that the *hind wings* are articulated to the metanotum in all the four-winged insects—portions of

them are shown in connection with this dorsal plate in the figure. F indicates the metanotum.

Having described the metanotum, we must now consider the structure of the metasternum, which is shown in figure 8. Bones analogous to those described in figure 6, and lettered *a*, *b*, have the same letters in this illustration. They indicate the structures named by Kirby and Spence, as *pleurœ*, and *parapleurœ*. We dislike these terms, which are special, and prefer to employ instead old and familiar anatomical expressions which designate parts having a kindred function. In reality, these bones are the shoulder blades of the *posterior*, as those already described are of the anterior wings, and as such, we prefer to call them—scapulæ of the metathorax, or mesothorax, as the case may be. Those persons who prefer to use the nomenclature of Kirby and Spence, in preference to our own, will recognize the *pleurœ*, in both these figures at *b*, and the *parapleurœ* at *a*. We distinguish them as *the larger* and *lesser* shoulder blades of their respective segments of the thorax. The full description of the figure is as follows :

a, large shoulder blade of posterior wing;
b, lesser shoulder blade of posterior wing;
c, metasternum, or breast bone of the hinder portion of the chest;
d, coxa, or hip of posterior legs;
e, trochanter;
f, femur, or thigh;
g, tibia, or shank;
h, tarsus, or foot;
i, horny spines.

For the great and unusual development of the several bones belonging to this segment, we regard Dyticus as the most beautiful insect we have ever seen. The large shoulder blade, *a*, is of extraordinary size; the beetle is heavy and, although aquatic, it comes out of the water at night and takes long flights. It is strong on the wing, and requires abundant space for the attachment of the powerful muscles destined to the performance of this especial function.

Its habitat, the water, necessitates certain important modi-

cations of the ventral surface of the skeleton as imperatively necessary. To facilitate its motions in its native element, great breadth, associated with a certain degree of flatness of the body, is necessary ; can anything more suited to this want be imagined than the remarkable extension of all the bones belonging to this metasternum?

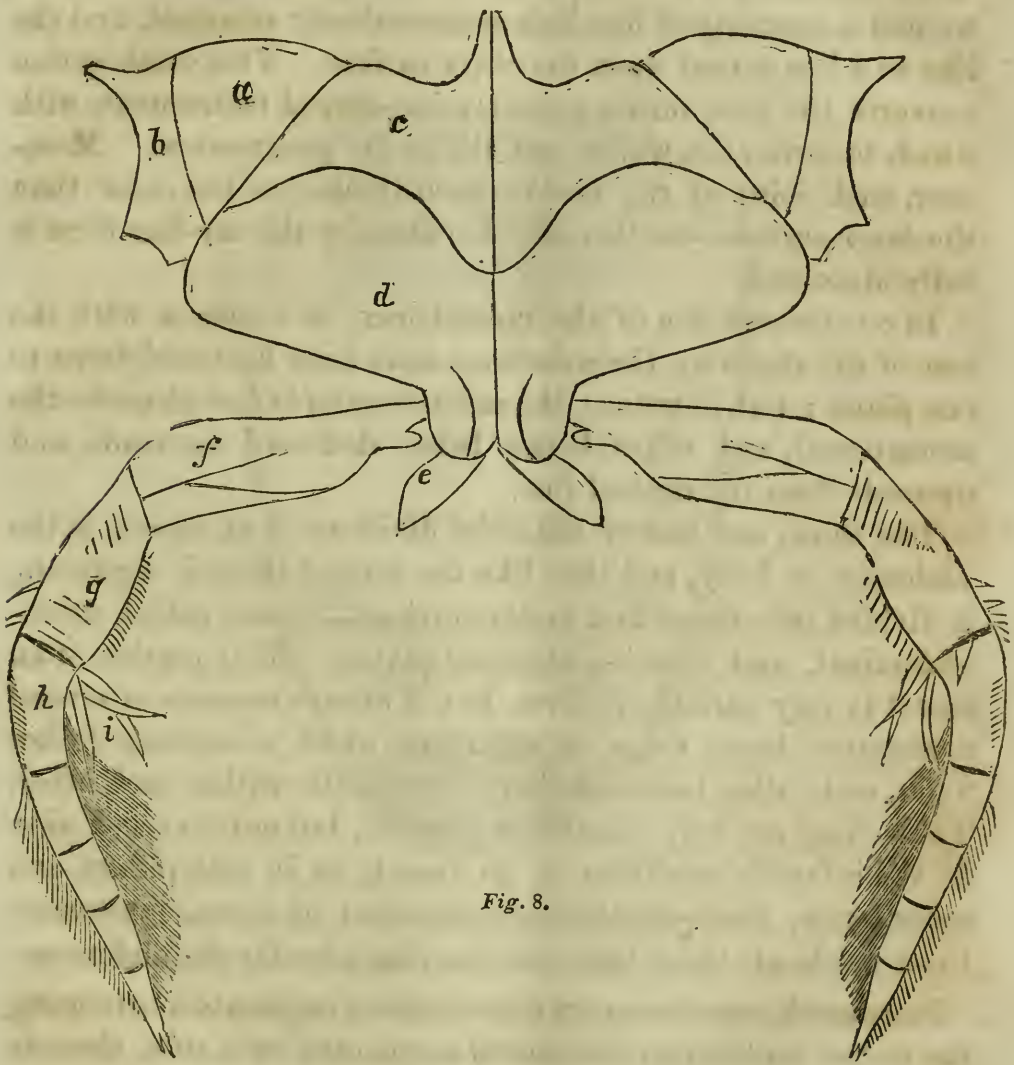


Fig. 8.

The metasternum (*c*) is of amazing size! whilst the hips (*d*) are produced in the form of exceedingly large flat plates, for a two-fold reason—one, that they thereby contribute to render the creature buoyant in the water; and the other, that the enormous muscles requisite for the purposes of the sole pair of legs destined to propel the animal through the water, require attachment to *a fixed body as a fulcrum*, and these bones are

anchylosed, in the language of the anatomist, but in common terms, *soldered* to the sternal bone.

The next portion of this segment demanding especial notice, is the foot. This is composed of five large and strong bones, somewhat pyramidal in shape, and each smaller, more attenuated, than the joint that precedes it. Upon the inner surface, we find a quantity of fine hair symmetrically arranged, and the like to a less extent upon the outer surface. This combination converts the foot into a perfectly oar-shaped instrument, with which to strike the water, and aid in its progression. Moreover, each joint of the foot is much thicker on the *outer* than the *inner* surface—feather-edged—whereby the oar-like form is fully identified.

In our preparation of the metathorax, in common with the rest of the skeleton, the structures have been flattened down to one plane ; but in nature, the metasternum is *keel-shaped*—the metasternal, and other bones being deflected outwards, and upwards from the central line.

The third, and last of the *chief* divisions of an insect, is the abdomen, or body, and this, like the several thoracic segments, is divided into upper and under portions—thence called, dorso-abdominal, and ventro-abdominal plates. This portion of an insect is very variable in form, but it always consists of several consecutive horny rings, or segments, which sometimes follow upon, as in other instances they are retractile within each other. These rings are very variable in number, but never exceed *nine*. In the infantile condition of an insect, as in caterpillars, and other larvæ, there are *thirteen* segments ; of these, one constitutes the head, three the chest, leaving *nine* for the abdomen.

There are disagreements in the number of segments constituting the dorso- and ventro-abdominal segments ; as a rule, there is one segment more in the back, than in the ventral portion. The disparity is sometimes greater than this, for example, the *Carabus* possesses *nine dorsal*, but only *five ventral* segments. Sex also makes a difference in this respect ; thus in all the *Aculeate Hymenoptera*, (*aculeus*, a sting,) the males have *seven*, whilst the females have but *six* segments. It frequently happens, however, that some of the ventral segments appear to be

united into one; more commonly, the last segment is so completely covered by that which precedes it, as altogether to escape superficial observation.

Again, the abdominal segments are either *simple horny rings*, or each consists of a superior and inferior *half horny ring*, which are brought together at the sides by means of a delicate membrane. Generally in the *Coleoptera*, and such insects as possess

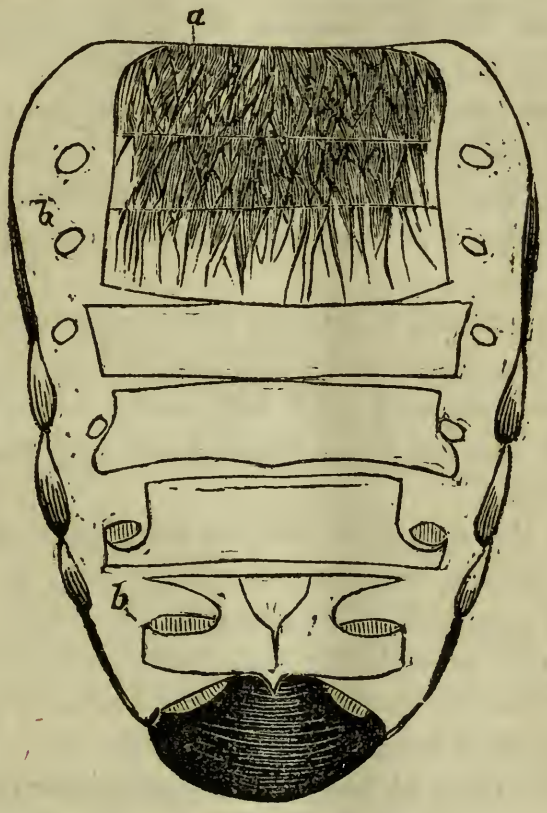


Fig. 9.

hard superior wings, the soft uniting membrane of the semi-crustaceous segments lies exposed—the hard elytra supplying the place of any other kind of covering. In these orders, therefore, it happens that the *ventral* portions acquire additional firmness, and consistency. The delicate membrane which connects the half segments is not generally visible, except in *gravid females*, when from the great distension of the abdomen they become apparent.

At the points of intersection of the transverse and longitudinal membranous stripes, there is found on each side of the body a small, variously shaped opening, surrounded by a callous

margin; this is called the *air hole*, *stigma*, or *spiracle*, and leads into the respiratory organs. The callous, or corneous ring of the spiracle is called the *peritrema*. The position of the spiracles is various; in the beetles they lie upon the *dorsal* surface, and are covered, and protected by the elytra. In some insects they are placed at the sides, whilst in others they occupy the margins of the ventral plates.

The membrane which connects the horny plates, was called by Kirby and Spence, *pulmonarium*, in consequence of its possessing the commencement of the respiratory apparatus ; but inasmuch as the intention of its production is simply to form a *bond of union*, or to connect the divided portions of the segments respectively, it is better to call it the uniting skin, or *conjunctiva*.

The dorso-abdominal segments, are represented in figure 9. It will be seen that they consist of eight half-rings; in structure they are membranous, and quite soft, and delicate in their texture; they form the bed upon which the folded wings lie when in a state of repose.

Referring to the figure, it will be seen that *a*, points to a large quantity of hair, which arises wholly from the upper portion of the first segment. Examined in the recent beetle, this hair will be found remarkably long, soft, and silky, and inasmuch as its production in this species of beetle is peculiar, the question arises, what renders it necessary?

We have said that, although an aquatic insect, it quits the water at night, and takes long flights in the air; at the approach of day, it once more seeks water and recommences its aquatic existence. The wings are large and powerful, and the frequent folding and unfolding of them might subject them to great injury by reason of the *friction* necessarily induced; to obviate this contingency, we see recourse to this beautiful arrangement of supplying a most luxuriant growth of wonderfully soft hair, developed at the spot where the friction is the greatest.

The spiracles, of which there are *seven pairs*, are shewn at *b*, *b*. It will be seen that the two last pairs are by far the larger, and for this reason: during its sojourn in the water, it is compelled ever and anon, to seek the surface of the water, to dis-

charge the carbonic acid gas from its respiratory organs, and inhale oxygen from the atmosphere. For this purpose, it thrusts the terminal segments of the abdomen only, *above the surface of the water*, and the operation is instantly performed.

It will hence appear that the *majority* of the spiracles are rarely used—only, in fact, when the creature becomes a denizen of the atmosphere. Now, it is well known that *use of an organ* tends to its development, and this law of physiology applies as much to insect structure as to our own.

Fig. 10.

The ventro-abdominal plates are shown in figure 10. It will be seen that the segments are reduced to seven—demonstrating the truth of our assertion in regard to the absence of one segment in the ventral, as compared with the dorsal portion.

In structure it is *densely* crustaceous, and brittle.

It will readily be perceived that a variety of special modifications of the skeleton have been rendered necessary to adapt this beautiful beetle to a two-fold habitat—as an aquatic insect, and an inhabitant of the atmosphere.

The structure, throughout, of the two first divisions of the chest, are in conformity with its *terrestrial* wants; the third segment of the chest displays the double element—wings for flight articulated to the dorsal surface, and legs, specially formed for swimming on the ventral surface, whilst the very peculiar modi-

fication of the coxa, in size, no less than form, fully establish aquatic requirement.

The arrangement of fringed hair on either side of the feet, is strictly necessary for progression through the water; the creature has the power to stroke the hairs close to the sides of the feet whenever it requires to sink suddenly, and it drops like a stone. On the contrary, when it desires to remain on the surface of the water, it extends these hairs at right-angles to the body, whereby its buoyancy is maintained.

Neither is the dorso-abdominal portion deficient of the dual characters. We have directed attention to a quantity of silky hair, over which the wings glide; were this not an aquatic insect, such structure would be unnecessary, and hence it is not given to strictly *terrestrial* beetles. Another reason presents itself in close alliance with aquatic wants, for example: as soon as the animal creeps out of the water, its body is more or less wet, especially the soft tissues composing the upper portion of the dorsal segments. In this condition, it would be impossible to unfold its wings without the assistance of the tuft of long hair referred to; but this *cannot be wetted*, consequently the wings can easily glide over its surface at any time, or under any circumstances.

The modification of the spiracles, is also another indication of a two-fold want; were it not an inhabitant of the water, this beetle would have no need of the very large sized two pairs of terminal spiracles—the only organs employed for aquatic respiration.

The whole of the figures illustrating the skeleton of Dyticus, have been carefully drawn to scale, and so correctly has our artist depicted them, that a perfect fac-simile of the preparation is presented.

The illustrations of the preceding articles represent an English beetle, but they apply also to the Dyticus marginalis of the United States, which is found abundantly in fresh water pools, during the summer months.

(To be Continued.)

ARTICLE III.—Report of an Operation for Extirpation of the Parotid Gland, and Ligature of the Common Carotid Artery. Read before the Grand Rapids Medical Society, March, 13, 1856. By D. Willard Bliss, M. D.

Mrs. F. (aged 41 years,) consulted me, December 10th, 1853, for a large tumor, situated immediately below, and in front of the left ear, extending over and firmly attached to the ramus of the lower jaw—in size about the half of a goose egg, with its apex pointed upward.

The tumor was immovable, very dense, nodulated upon its surface, and broad at its base, which, however, was not well defined, being intimately blended with the surrounding soft parts.

The previous history of the case, as given me by the patient, was—that some three years before consulting me, she observed a small tumor, situated immediately in front of the ear, about the size of a large pea, soft and moveable, entirely free from pain, heat, or tenderness. Its growth was not particularly rapid, but gradual; and in twelve months from its first appearance it had attained the size of a large walnut, became more dense, less moveable, while the movements of the jaw, in mastication, occasioned sharp lancinating pains through the tumor and in the tempero-maxillary articulation.

It would, perhaps, be proper to state in this connection, that Mrs. F. at this crisis, consulted a "*Cancer Doctor,*" and, after receiving a written guaranty for a radical cure—by paying ten dollars in advance—she applied his caustic paste, which produced a slough that (as the patient stated,) "seemed to remove the entire tumor." The cavity thus formed granulated but indifferently, and it was several months before the parts became perfectly healed. During the reparative process the surrounding soft parts, to the extent of the boundaries of the parotid gland became tumefied, dense, and painful, and at the time she consulted me, Dec. 10, her constitutional symptoms began to give evidence of the malignancy of the local disease, the countenance rather pale, with a slightly leaden hue, pulse 90, increased susceptibility to external impressions, anorexia,

general debility, together with no small degree of mental suffering.

After stating, most fully, to the patient and friends, my opinion of the undoubted malignancy of the tumor, the evident cachexy and constitutional disturbance, consequent upon the advanced condition of the local disease, the liability of a return of the disease, in some other organ, should an operation be instituted for its removal, the probability of putting off the fatal day and rendering life more tolerable to the patient, the *possibility* of effecting a radical cure, and as there was not, at this time, any evidence of the suppurative process having been established in the part, I yielded to the earnest solicitations of the patient and friends, and, accordingly, on the 15th of December, assisted by Dr. Jno. Avery, Dr. Fallas and my student, Mr. J. P. Crawford, I performed the operation by placing my patient upon a table, resting upon the back, her shoulders a little elevated, and head slightly turned to the opposite side.

I then commenced my incision near the sterno-clavicular articulation, and carried it up to the angle of the inferior maxillary bone, parallel with the fibres of the sterno-mastoid muscle. The common integument anterior to the incision was dissected up and reflected back, and brought to view the anterior-inferior boundary of the tumor, which extended below the bifurcation of the common carotid artery. The lower portion of the tumor was then carefully dissected up and held by an assistant, while I proceeded to open the cellular tissue forming the sheath of the vessels, the carotid was brought to view and a ligature placed around its upper third. I then commenced my inferior transverse incision near the point of ligation of the carotid, carrying it backward over the sterno-mastoid muscle so as to correspond with the superior boundary of the tumor, thence upward to the insertion of the last named muscle, then forward under the lobulus of the ear, a small portion of which was implicated in the disease and removed, thence upward immediately in front of the tragus, across the middle root of the zygoma, thence downward and forward along the anterior border of the

ramus of the jaw, forming a junction with upper extremity of my first longitudinal incision.

The tumor was then carefully dissected out—great care being taken to include the entire diseased mass, which extended in depth to the styloid process of the temporal bone. The hemorrhage during the operation, was very profuse, and it became necessary to ligate a great number of small vessels, as well as the distal extremity of the external carotid. I then carried an incision downward and backward, from the posterior extremity of my inferior transverse incision to the point of junction of the external, with the middle third of the clavicle. The flap was then dissected up, and after the hemorrhage had entirely ceased—brought out into place and carefully attached to the margin of the cavity, by the interrupted suture. A compress placed upon the flap so as to keep its inner surface in contact with the parieties of the cavity, the head slightly turned to that side, the patient put upon low diet, perfect quiet enjoined. Union by first intention took place with the entire flap, except at the point where the ligatures were brought out. On the third day nearly three-fourths of an inch of the upper and anterior portion of the flap disunited, this point, however, produced healthy granulations and healed kindly. The ligatures were all removed at the fourteenth day, except that around the common carotid, which came away the seventh week. The recovery was rapid and perfect, save the paralysis of that side of the face from the division of the facial nerve, and the patient expressed herself entirely free from those peculiar local pains or constitutional disturbance which had been so marked and alarming previous to the operation. Her general health rapidly improved, and all the symptoms inspired us with the hope that the operation had been most successful in eradicating the disease and placing her beyond the probability of a return.

About nine months after the operation Mrs. F. again consulted me, and stated she was suffering from a severe and continual pain in the ear and mastoid portion of the temporal bone of the left side. Upon examination I found the external ear entirely closed by the tumefaction of the soft parts composing its posterior wall, which were very dense, and of a white or pearly appearance.

The mastoid portion of the temporal bone was much enlarged, and gave pain upon pressure.

I considered the above symptoms unmistakeable evidence of a re-development of the disease in the external ear, probably involving the external ear and mastoid cells, and accordingly advised free and constant use of anodynes, with the hope of affording the patient a comparative degree of insensibility to her sufferings. A few weeks subsequent to my last interview with Mrs. F. she suffered a rapid increase of all the local symptoms which she had experienced previous to the removal of the tumor, with great constitutional disturbance and derangement of of her mental faculties, and at the expiration of sixteen months from the date of the operation she died.

There was no ulceration of the soft parts, nor discharge from the ear, and the parts composing the flap remained entirely healthy to the time of her death.

ARTICLE IV.—Syphilitic Bubo. A Paper originally read before the Detroit Medical Society, by Moses Gunn, M. D., Professor of Surgery in the Michigan University.

Disobedience to no law entails more surely the penalty of suffering upon offspring for the sins of the parent, than that which is realized in the propagation of venereal taint from one to succeeding generations. The impossibility of begetting healthy offspring by one whose constitution is suffering from syphilitic contamination, renders the study of this disease in all its forms, one of the deepest interest to the physician, and of the highest importance to suffering humanity ; and as the constitutional is the only hereditary form of the disease, all means for preventing its supervention upon the initiatory manifestations, demand the earnest attention of all whose mission it is to alleviate the condition of their race. In view of this fact, allow me to dwell for a few moments, this evening, upon the nature and treatment of *bubo*.

By the term *bubo*, I would confine myself to the specifically infected and inflamed gland, when the inflammation is the result

of the absorption of the syphilitic virus by one of the lymphatic vessels, and arrested by the gland on its way to the general circulation, thus constituting the *genuine bubo*, which is to be distinguished from the *false* or *sympathetic* bubo, which sometimes accompanies gonorrhea, and also from that swelling of the groin where the inflammation is propagated to the gland by contiguity. It is further to be distinguished from those swellings of the glands which frequently manifest themselves during the course of constitutional syphilis, in short, it is *specific* in its nature.

Syphilis presents itself to us in two widely different and distinct forms, to wit, the local and constitutional disease; and differing, as they do, as greatly in their treatment as in their nature, in enquiry into the pathology of bubo, it is well to determine to which of these two forms it belongs, and with which it should properly be ranked—whether it claims our attention as a *primary*, and *local* disease, or is to be viewed as a feature of the secondary affection. If it presents characteristics in keeping with the chancrous ulcer, and totally dissimilar to any manifestation of secondary disease, its rank cannot for a moment be doubted. To determine this point, a brief examination of some of the main features of the two forms of disease will suffice.

The local disease, or the disease in its primary form, reproduces itself in its exact nature, by contact of its virulent pus with healthy tissues, or in other words, by inoculation; and in this manner it is propagated ; but so long as it is local in its nature, the system yet uncontaminated, healthy offspring may be begotten. If in the connection by which impregnation takes place, the primary disease be not communicated to the mother, and entail upon her the constitutional form, the new being will inherit no taint of the disease. But by the absorption into the system and mingling in the circulating fluids of the body, of the virus of the primary disease, that virus undergoes a change, becomes modified in its nature, after which mingling and modification, though no longer capable of reproducing its exact form, by inoculation, it contaminates the system, and is transferable from parent to child, from the nurse to the child, and

occasionally from person to person, by intimacy of habits. This absorption may take place in three principal ways: first the virus may be taken up by the absorbants, either veins or lymphatics, without effecting any solution of continuity of the surface, and thus inoculating and producing the chancre. Second, by the virus from the chancrous ulcer which has produced the virus; and, third, by the lymphatics from the same virus-producing surface. When the absorption takes place by the veins, either directly without producing the ulcer, or from the surface of the ulcer itself, it is carried directly into, and mingled with the general circulation, thus contaminating the system and producing the secondary form of the disease without the appearance of the bubo. But when the absorption takes place through the medium of the lymphatics, the lymphatic glands acting as guards against the introduction of deleterious substances into the system through this avenue, arrest the passage of the virus, which being there detained, inoculates the gland so detaining it, and produces an inflammatory condition of not only the gland itself, but of the adjacent areolar tissue. It is this condition which constitutes the *genuine* or *syphilitic* bubo. The inflammation of the gland passes into suppuration, ulcerates through the tegumentary covering, and thus nature makes the effort to eliminate the poison from the system before it has mingled in the circulating fluids and produced general contamination. If in this effort she is successful—if none of the virus is reabsorbed from the new ulcerous surface, and if no further absorption has taken place from the original chancre, the system escapes from the constitutional form of the disease. Thus it will be seen that the genuine bubo is but a salutary effort on the part of nature to prevent contamination of the system and the development of the secondary form of the disease. It is further observed that the genuine bubo is a specifically infected gland—an internal chancre, or chancrously affected gland, for as the virus is unchanged till it is mingled in the general circulation, it will, if taken from the lymphatic vessel upon the distal side of the gland, reproduce its exact form, or rather a genuine chancre, and also if taken from the gland itself, will produce the same results. Experiment proves this, as those conducted

by Ricord abundantly show. Pus taken carelessly from a suppurated bubo, would sometimes inoculate and at others fail, but if care were exercised to obtain the virus from the gland itself, and not from the suppuration of the surrounding areolar tissue, it invariably inoculated. Inoculation here is as successful and satisfactory in its results as when practiced to determine cases of doubtful syphilis, care being taken only, to obtain the purulent virus from the gland itself. The primary nature of bubo is also further indicated by its occasional appearance as a first manifestation in a chain of syphilitic symptoms, chancre having never preceded it, the virus being absorbed without producing local results at the seat of absorption, the pus from the bubonic gland however inoculating and producing the perfect chancre. In reference to this form of chancre or chancrous gland, Blackmar, in his edition of Vidal, says, "During our recent visit to London, Mr. Lane very politely showed us, at the Lock Hospital, two cases of the bubo *d'emblée*. In one of these cases inoculation had produced the characteristic pustule. The brief notes of the case, as made under the supervision of Mr. Lane, are as follows: Thomas Hughes, aged 22, admitted into Lock Hospital, May 5, 1853. Six weeks previously, had last connection. At the time of our visit, 26th May, he had a bubo for a month. No trace of a sore on the penis, or any other point. Both Mr. Lane and myself, after diligent inquiry, could detect no other symptom. Matter from the bubo was inoculated on the left thigh, on the 21st of May. On the 26th, characteristic pustule, which we saw, was perfectly developed, and Mr. L. directed it to be cauterized at once."

Ricord presents cases of this primary bubo, though he disbelieves their existence without a preceding chancre, and supposes the concealed chancre of the urethra to be the cause.

Vidal says "For my own part I have seen several instances of the primary bubo." But whether the bubo be preceded or accompanied by a chancre or not, little doubt can be entertained that the genuine syphilitic bubo always possesses primary qualities, and should therefore be ranked as one manifestation of the primary form of the disease. If this be the true pathology of bubo, and if the chancrous nature of a bubonic swelling be

suspected, assumed, or proved, the question naturally arises as to the proper treatment of this phase of syphilitic disease.

It has been well said that he best deserves the name of physician, who most correctly interprets nature's laws and indications, and most studiously observes and follows them. Guided by this principle, that treatment which will most promptly second the efforts of nature should be selected, and as we have said that the effort of nature is to eliminate the poison from the system by a suppurative process, and that the glands are but answering their chief physiologic office in thus arresting the progress of the morbific matter on its way to the circulating current, local applications of such nature as will assist the suppurative process, are naturally indicated. All attempts at resolution of the swelling by the application of discutients, evaporating and cooling lotions, compression, or any other means which has for its object the dissipation of the swelling, are not to be tolerated, for by such a course of treatment we thwart rather than assist nature in her salutary efforts. If by such applications the inflammation is resolved, the virus which was its cause is driven into the system, and the constitutional infection, which might otherwise have been prevented, becomes sure, and secondary syphilis, instead of being doubtful, is certain. It is true that the free suppuration of the bubo does not insure exemption from the secondary form of syphilis, but not unfrequently follows a freely suppurating gland ; but this may be the result of absorption of virus from the original chancre by the veins, or reabsorption from the new chancrous surface of the bubo. But though free suppuration of a bubo, and free evacuation of the matter is not a certain preventative of further contamination, it renders the accession of the secondary disease much less certain. Indeed, this is proved by the fact that not infrequently constitutions are exempt from the secondary disease, which have suffered from chancrous and suppurating bubos; while cases are not less frequent, in which the secondary form has speedily followed the repelled bubo, and even the original chancre, without the intervention of the bubo. Constitutional syphilis does also occasionally manifest itself as the original and only form of the disease in previously healthy subjects, the

absorption of the poison being undoubtedly effected through delicate portions of the tegumentary or mucous covering, in an active condition of its vessels, without producing local effects. Such being the mode of absorption, and the veins being the absorbing vessels, the circumstances favoring the development of the primary form are absent, the virus is mingled at once in the circulating fluids and general contamination is the only result.

But to return to the treatment, the parts should be cleanly shaven, and warm poultices and emollient applications made to encourage local action, and thus facilitate the inflammatory and suppurative processes. These applications, rest in the recumbent posture with thighs flexed, aperients, and if the reaction demand them, antiphlogistic remedies and diet should be persevered in till suppuration takes place. Upon the first appearance of fluctuation the swelling should be freely opened, and the evacuation of matter encouraged. It is possible sometimes to detect in the abscess the gland itself yet unruptured though containing matter, suppurative action having taken place in the areolar tissue around the gland. Such being the case, the gland should be completely extirpated. When this is not the case, the opening should be deep enough to reach the centre of the affected gland, and sufficiently wide to effect the free exit of the pus; for it must be borne in mind that only the pus from the gland itself is specific and capable of doing mischief. The parts should now be kept dressed with lint completely saturated with black-wash—these dressings to be frequently changed and the utmost cleanliness to be observed. Should the discharge inoculate the surrounding integuments, or should any portion of the wound assume a chancrous appearance, it should be treated as an original chancre. The constitutional treatment will vary of course, according to the mercurial or non-mercurial tendencies of the surgeon, but a course of constitutional remedies should be exhibited as a prophylactic against the secondary form of the disease.

ARTICLE V.—Chapters from an unpublished work on Hygiene. By A. R. T.

CHAPTER I.

Clothing—Bathing—Care of the Skin, Teeth, Hair, Nails, &c.

The skin is one of the great excretory organs of the system, and on its healthy action depends much of our bodily and mental vigor. Varnish a man all over, so as to check the excretions from the skin, and he will speedily die. Let the capillary vessels of the skin of a sedentary man become torpid and clogged from want of good soap and water, and he is sure to be sick. The hard laborer, by dint of a powerful circulation excited by by severe exertion, throws off the obstruction, and revels in good health in spite of the dirt. But to every individual in whatever walk of life, a clean and healthy skin is a great blessing, and megrims and dyspepsia will seldom be the lot of the habitually well-washed man.

The climate of most portions of the United States is so variable, that clothing becomes a matter of primary importance. In all the northern and middle States a sudden variation of thirty or forty degrees of Fahrenheit's thermometer is of no uncommon occurrence, and how to guard against these sudden changes is a question of great importance. The clothing immediately in contact with the skin should be of such a kind that a sudden change from a still atmosphere to windy weather will not produce rapid evaporation and a consequent chill. The farmer, the mechanic and the day laborer should always, at all seasons, wear flannel or fleecy cotton next the skin, for in no other way can the evil effects of sudden changes be as well guarded against. Those whose occupations do not produce so much perspiration, need not be so careful in guarding the skin against the effect of sudden changes, but a cotton, silk or flannel undershirt and drawers will do no man any hurt at any season, nor will they abridge his comfort. Outside clothing must be regulated in a great measure by the feeling of the individual. It is a good rule always to be comfortable and warm enough. The proper clothing of the legs and feet, especially in

females, is a matter of the utmost importance. Keep the feet and legs warm and dry, and the rest of the frame will rarely suffer. Thin shoes and thin stockings lay the foundation for many a consumption. Did the fairer portion of the creation know how very unattractive they look on a raw, chilly day, in a sloppy street, with kid slippers and silk stockings, and as a consequence, their pretty noses mayhap blue and pinched, and their bright eyes filled with a dimming rheum, not the effect of sensibility, but of a biting cold wind, they would at once adopt worsted hose, thick shoes, veils, and warm hoods. Delicacy as a consequence of ill health, is never attractive to a reasonable man; where it is inevitable he may pity—where it is the consequence of vanity and imprudence, he must despise. Much ill health and many premature deaths are caused among females, by the practice of appearing at evening parties in winter, in such clothing as they would never dream of wearing at home. To be sure, at such parties the rooms are generally hot, and if the exercise of dancing is indulged in, no cold may be taken until the house is left. Then comes the walk or drive home, in nine cases out of ten, with insufficient clothing ; the consequences need not be depicted. Many a happy home has been desolated by the cold taken at a single evening party in winter. I would not have my dear countrywomen enervate themselves by too much care, but I would have them invigorate their constitutions by plenty of riding and walking exercise at all seasons, and not throw away their happiness, health and beauty, at the shrine of the false and heathen goddess, Fashion. Depend upon it, there is no true beauty without health.

As a general rule, water-proof garments are neither pleasant nor wholesome ; the reason is, that they confine the insensible perspiration, and if they are worn for any considerable length of time, a feeling of unpleasant chilliness and dampness is sure to follow. In rainy weather, a loose waterproof garment may be advantageously worn for a short time. If Indiarubber overshoes are worn, they should cover as little of the top of the foot as may be; but a thick-soled shoe or a leather *galoche* or patten is much better.

I hope it will not be considered an unwarrantable meddling

with what is generally thought the peculiar province of the fairer portion of creation, if I make a few remarks on corsets, skirts, &c. So much has been said and written against tight lacing, and the ladies have become so well aware of its deleterious effects, that I believe very few injure themselves in that way nowadays. But another effect of the crusade against tight lacing has been to banish the corset, in a great degree, from use. This is unfortunate, because, in the present way of dressing, a well made corset is a most useful garment, and, indeed, almost indispensible to the comfort of many females. The dragging of three or four heavy skirts, supported only by the hips, and pressing on the lower bowels, has a most deleterious effect on the health, and often gives rise to, or aggravates some of the most distressing maladies to which women are subject. A well made corset or waist, to which the skirts can be attached by buttons or ties, does away with the difficulty entirely. Reform, as is often the case in other matters, has in this gone beyond the bounds of reason, and, in remedying one evil, has produced another scarcely less grave.

BATHING.

A well washed people must be a refined people, and will be very apt to be a moral people. That "*Cleanliness is next to Godliness*" is nearer true than many suppose. "*The mind doth from the body's purity derive a sympathetic aid.*" The whole civilized world seems to be awaking to the absolute necessity of plenty of pure and wholesome water, not only for drinking, but for washing purposes, and, in our country especially, large communities, which have been for years content with hard well water to drink, and with smoky rain water to wash in, are erecting water-works on a large scale, to send the sparkling streams of our noble lakes and rivers coursing in a thousand channels, to refresh the thirsty and cleanse the dirty. That every man, woman and child in ordinary health would be benefited by a daily thorough washing from head to foot, I do not doubt. But such a state of things is hardly to be expected; if each person could get a thorough wash once or twice a week, it would be a

great improvement on the present state of things. Some of my readers will, I am afraid, hardly credit what I am now going to relate; but it is a fact, that in more than one instance, when I have wished to strip up the sleeve of a flannel undershirt of a patient, I have found the wristband sewed, and on inquiry have been informed that but one was worn during the whole winter, which was sewed on in the autumn, and ripped off in the spring. And this has occurred in families comfortably off, and was not done as a matter of economy, but of convenience. What must be the condition of a skin thus abused?

There is much difference of opinion, in regard to the temperature of the water used for bathing. In my view, no rule can be laid down, in regard to its temperature, which will apply to all cases. Different seasons of the year, different ages, and, above all, different constitutions require different temperatures. The robust man with a strong circulation will be invigorated by a cold sponge bath, which would cause the delicate man to feel weak, sleepy and chilly for hours after. Different conditions of the system in the same persons will require different temperatures of water for bathing. The man who is fatigued and exhausted by severe exercise or labor, will be injured by a cold bath, while a tepid bath will refresh and invigorate him. The sedentary man will, as a general rule, not bear cold bathing as well as the man of active habits. Many persons are in the habit of sponging the whole surface in cold water immediately after rising in the morning. This is no doubt salutary, when perfect reaction promptly follows, but it is certainly hurtful, when chilliness, weakness and loss of appetite succeed it. Persons suffering from any internal organic disease, or congestion, should never use a cold bath. The temperature, which will suit most constitutions, and agree most generally with all ages, and with all states of the constitution, is from 75° to 85° of Fahrenheit's thermometer, and the daily use of a plunge bath of this temperature will agree with almost everybody.

The shower bath, followed by vigorous rubbing either with a coarse towel, or a hair glove, or flesh-brush, is a very invigorating process, and can often be borne by persons who cannot bear the sponge. A modification of the Russian method of bathing,

I have found in some cases of extreme debility, to act promptly and safely as an invigorant. The Russians take a steam bath of a very high temperature, and after the skin is fully relaxed, and streaming with perspiration, they plunge into a snowbank. So far from any bad consequences following this, the reaction is perfect, cold is never taken, and the circulation in the skin goes on with ten-fold vigor. I have used in my own person, when in a condition of extreme debility, a cold shower bath after a very hot plunge bath, with the happiest effects; and the shock of the shower bath was less in this case, than when taken without the previous hot plunge bath.

The *sitz* bath, the douche, and the packing in wet sheets of the hydropathists, although powerful remedial means, and in judicious hands often of signal use, can hardly be treated of here. I shall leave them to those whose business it is to administer them.

CARE OF THE SKIN.

If bathing and washing are assiduously practiced, they are all the care that in most cases is needed for the skin. In some persons of languid circulation the hair glove, or flesh-brush is a valuable auxiliary to the bath. In cases of actual cutaneous disease, (which, by the way, will be of very rare occurrance to the daily bather,) a physician of course must be consulted.

THE TEETH.

"My curse upon thy venom'd stang,
That shoots my tortured gums alang;
And through my lungs gi'es many a twang,
Wi' knowing revenge;
Tearing my nerves wi' bitter pang,
Like racking engines!

It is said that the inhabitants of the United States are much more subject to decayed teeth, and, consequently, to toothache, than Europeans. The cause of this. if it be so, is not very clear. There is a great difference in different individuals in the original structure of the teeth. Some are strong, slightly yellow, and perfectly opake ; others have a dead white appearance,

resembling pieces of chalk, while others appear translucent, and have blueish tinge. Writers on the teeth consider the first variety as the most durable, while the other two are about equally fragile, and subject to early decay. Microscopic researches have shown that a variety of parasitic animals inhabit the earthy deposite called tartar, which is found at the edge of the gum in badly cared for teeth. These animals are supposed to destroy the enamel, and conduce to decay. This accumulation of tartar separates the gum from the neck of the tooth, and, in this way, deprives it of a portion of its support.

When there is any considerable accumulation of tartar, or any decay of the teeth, and also where the teeth are crowded in childhood, immediate resort should be had to a skilful dentist. The constant use of a soft brush, with water, once or twice a day, and, occasionally, a little mild soap will generally prevent the accumulation of tartar, and keep the teeth clean and sightly. Nothing harder than a quill should be used to remove fragments of food from between the teeth.

The pain and irritation of jaws full of decayed teeth and inflamed sockets must exert a very deleterious effect on the general health ; and induce such a use opium and other powerful narcotics as to temporarily derange every function of the system. Decayed teeth often cause the most painful forms of neuralgia, or tic-doloreux, and the relief afforded by opium sometimes lays the foundation of the dreadful practice of habitual opium-eating. Most of these evils may be avoided by an early habit of systematic care of the teeth ; and the comfort derived from such care, and the cheapness of the instruments necessary, leave no one an excuse for neglecting his teeth. Beauty of features is completely neutralized by black and irregular teeth and an offensive breath. I recollect an anecdote in point, which was told to me many years ago, by one of the parties concerned. The editor of an eastern paper, who was distinguished for his ready wit, was introduced by a friend of mine to a lady who had been a famous beauty, who, from the combined effects of years and ill health, had lost the beauty of her teeth before her other charms had become seriously impaired. After the visit, the introducer

asked, "Is she not beautiful?" "She would be so, were it not for that d—d charnel house of a mouth," was the answer.

THE HAIR.

Care of the hair is another important item in respect to health and comfort. The question naturally arises, why is it that men become bald so much soon than women! There appear to be two or three causes for this: one is that the head covering of men is much heavier and warmer than that of women, and that men are more exposed to the heat of the sun than women are. But the principal cause seems to be the over-stimulation of frequent clipping in childhood, to which boys are much more exposed than girls. At the period of puberty, the growth of the hair in both sexes receives a sudden impetus, and hair appears in places where it has never grown before. Now, if the growth of the hair of the head has been unnaturally stimulated before this period, by frequent clippings, nothing is more probable than that the subsequent period of vigorous growth should be shortened. This is a law of which numerous illustrations will be found in the animal and vegetable kingdom; and I believe this to be the principal cause why men are sooner bald, than women are. The agreeable writer of letters from the shores of the Baltic, says that the ladies of Ethiopia have the finest heads of hair of any women in the world, and that from the earliest childhood the hair is never cut, except when a very short portion of the ends are cut off to even them and remove hairs which have become split and unhealthy. By following such a plan, the hair, before puberty, will neither be as long nor as luxuriant as when it is frequently cut; but after that period, it will be finer, stronger, and much more durable, and baldness will be delayed to a very late period of life. This plan is, of course, out of the question with boys; but I beg mothers to beware of frequently clipping the hair of their daughters.

To be Continued.

SPIRIT OF THE MEDICAL PRESS.

Selections from Favorite Prescriptions of Living American Practitioners. By Horace Green, M. D.

We have spoken of the valuable properties of the *protoiodide* of *mercury*, specially when this salt is administered with the iodide of potassium. There are several other salts, the product of iron and its combinations, which are medical agents of great value. The therapeutic action of these compounds s various. The iodide of *iron* acts as a *tonic* ; the iodide of *mercury*, as we have stated, operates as an *alterative* ; the *iodide* of *arsenic*, as an *excitant* and *tonic* ; the *iodide* of *lead* as a *diuretic* ; and the *iodide* of *sulphur*, acts most decidedly on the skin.

℞ Arsenici Iodidi gr. iij
Extract Conii ℥ss

Misce ; Fiant pilulæ xxx quorum sumantur una ter indie.

This medicine, after many other remedies have failed, has been employed with great success, in the treatment of some most inveterate cases of certain chronic cutaneous diseases; particularly lepra, psoriasis, and veneral eruptions. The dose may be cautiously increased to the one-fifth of a grain, three times a day. When gastric disorder supervenes, the medicine should be for a time suspended, and be subsequently renewed in the original dose.

Some practitioners in this country employ, with success, in the same affections, a combination of a solution of the arsenite of potash, and of the compound solution of iodide; as in the following extemporaneous preparation:

℞ Liquor. Potassæ Arsenitis ℥ ij
Liquor. Iodidi Potassii Comp ℥ ss

Fiat mist. cujus cap. gtt. v. ter. in die.

Both of the above preparations of iodine and arsenic are employed with great advantage, in the treatment of cancerous affections, particularly when those remedies are conjoined with the following ointment of the iodide of lead, employed as an external application:

℞ Plumbi Iodidi ℥ij
Axungiæ ℥ ij

Misce intim.

A small amount of this ointment may be rubbed in, twice a day, over cancerous, or other indolent tumors.

Under the head of *Tonics* and *Stimulants*, we have spoken of the therapeutic value of the iodide of *manganese* in the treatment of cancerous affections, glandular enlargements, and some other obstinate diseases. We have had prepared by an excellent apothecary of this city, after the formula of Proctor, a *syrup of the iodide of manganese*, which, as an excitant and alterative, is superior to the syrup of the iodide of iron, in the treatment of many diseases. This medicine—the syrup of the iodide of manganese—may be readily prepared in the following way:

℞ Manganesii sulph. ℈xvj
Potass Iodidi ℈xix

Dissolve the manganese and the potassium separately, each in three fluid ounces of water, to which are added two fluid drachms of syrup. When the precipitation of the crystals of sulphate of potassa, which will follow, is completed, filter the supernatant liquor through a fine muslin into a vessel containing *twelve ounces* of pulverized sugar. Then add to this, water sufficient to make the whole amount to *one pint*. Shake until the sugar is well dissolved, and keep the syrup in a glass stopped bottle. In tuberculosis, in scrofulous and cancerous affections, in the treatment of glandular enlargements, such as those of the spleen and of the neck, and in constitutional syphilis, the syrup of the iodide of manganese, administered in doses of from ten to twenty drops. twice or thrice a day, will be found to be a valuable remedial agent.

As alterative remedies, the prerprations of mercury are more employed by practitioners, than any of the other inorganic agents. Administered in small doses, the *bi chloride* of mercury is o valuable excitant. Its effects are more decidedly alterative, says Neligan, than those of any other preparation of the metal. In cases of chronic follicular disease, where the symptoms indicate the presnce of a thickening of the mucous membrane of the larynx, and in the early stage of some forms of pulmonic disease, we have found in the bichloride of mercury a most efficient alterative, and altogether one of the best therapeutic preparations of this mineral.

℞ Hydrarg. chlorid. corrosiv. gr. iv
Extract. Conii ℈ij

Fiat massa. in pilulas quadraginta divide. Sumat unam, mane et nocte.

An experienced practitioner affirms that in hepatization of the lungs, the solid matter deposited in the air-cells is often absorbed and the cells rendered permeable to air by the use of this preparation. In irritable subjects, opiates should be conjoined with this remedy, as the mucous membrane of the stomach and bowels is sometimes iritated by its use.

℞ Hydrarg. chlorid. corrosiv. gr. iv
Extract. Opii gr. x
Extract. gentian. ℈ij

Misse ; Fiant pilulæ xl quorum suma tur unam bis terve in die.

This preparation has also been highly extolled in secondary veneral affections, in chronic cutaneous diseases—particularly those which are attended with dry, scaly eruptions and in chronic rheumatism and arthritis. The following is the formula of Dzondi of Halle, who is a great advocate for the use of the bi-chloride of mercury:

℞ Hydrarg. chlo. corrosiv. gr. xii
Solve in aq. distil. q. s.
Adde micæ Panis albi.
Saccharis albi aa q. s. ut. fit pilulæ numero ccxl.

Of these pills—each of which contains the twentieth of a grain of the mercury—two may be given night and morning.

In many of the above chronic forms of disease, this medicine is advantageously administered, conjoined with a vegetable bitter tonic:

℞ Hydrarg. chlo. corrosiv. gr. iv
Tinct. Gentianæ ʒiv
Syr. Aurantii ʒij
Misce; quorum datc coch. parv. ter. in die.

An an excitant and an alterative, in many of the diseases in childhood, the hydrargyrum cum creta has been more universally employed than any of the other preparations of this mineral. It is, however, like the blue mass, not always a perfect preparation, as it consists of metalic mercury in a state of minute division, mechanically combined with the sub oxide of mercury, and the carbonate of lime. But it has not been ascertained in what proportions the metal and the oxide exist.

As a gentle and more certain laxative and alterative, and one equally well adapted for infancy and childhood, some eminent American practitioners prefer, altogether, the *chloride of mercury* minutely subdivided by being thoroughly triturated with a large amount of sugar.

To one part of calomel add ten parts, by weight, of white sugar.

℞ Hydrarg. chlorid. mitis, ʒi
Sacchari alb. ʒx

Triturate the two substances in a wedgewood mortar for ten or fifteen minutes, so as to subdivide minutely, and intimately blend the calomel and the sugar.

Those who have never tried the mercury thus prepared, will be surprised at the increased activity which will be imparted to the medicine, by this fine subdivision of its particles. Indeed, it is to this well established fact, that many medicines became much more active by minute subdivision, that the whole secret of the Hahnemannic "potency," or remedies, may be referred.*

Five grains of the above preparation, will contain half a grain of calomel, and this small amount, taken on going to bed, will produce, with most per-

* The editors of the "British Journal of Homœopathy," in a late number of this Journal, "the theory of dynamizstion to be untenable, and that it is now rejected by the great majority of Hanemann's disciples."—*Jour. of Hom. July*, 1852.

sons, a mild laxative effect, the following day. With young children. half this amount, or from two to three grains of the medicine placed on the tongue, (and children take it as readily as they will pure sugar,) will be sufficient, ordinarily, to prove cathartic.

A physician of this State, of large experience, who practices in a region of country where dystentery prevails as an endemic almost annually, assures us that this preparation of calomel is his favorite, and most efficient remedy, in the treatment of dysentery in children. He administers *one grain* of the powder, once in four or six hours ; employing, at the same time, injections of a solution of morphia, to control the dysenteric discharges. With this plan of treatment he has succeeded, he affirms, in arresting the disease more frequently than with any other method.

More than twenty years ago, we were instructed by our preceptor—who has since been a distinguished lecturer and writer on Materia Medica—to employ the following combination, as our "officinal" preparation of calomel:

℞ Hydrargyri chloridi mitis, 3ij
Extract. opii.
Ipecac. pulv. aa gr. vj

Pulverize, and mix intimately and thoroughly, as in the preceding combination.

Thus prepared, every scruple of calomel will contain one grain each of opium and ipecacuanha, intimately combined with the mineral.

During a period of twenty years, we have used no other preparation of calomel than the above in our practice. We have recommended its employment in our lectures to the students and graduates of the N. Y. Medical College, and to many physicians, who have adopted its use; and we venture the assertion, that no practitioner, after having once employed this combination will prefer, afterwards, to prescribe pure calomel in the treatment of disease. Under all circumstances, a given amount of this combination, whether administered as a laxative or an alterative, will prove fully as efficient as double the amount of pure or uncombined calomel; and without producing—whether given to children or adults—at all that degree of irritation, which ordinarily follows the administration of the latter. As a laxative, from three to five grains may be administered to an adult, and from one and a half to three grains, to children.

Besides the excitants and alteratives which are obtained from inorganic substances, there are important therapeutic agents of this kind belonging to the organic or vegetable kingdom, which are of much value.

The extract of *Podophyllum*, or *May Apple*, is much used as a remedial agent by physicians in some parts of this country; and when the remedial

value of the preparation of this plant is better known, it will be still more extensively employed by the profession.

℞	Extracti Podophylli	3j
	Extract Aloes Hepat.	3iij
	Gambogiæ	3j

Misce : Fiat pillulæ lx.

The above constitutes excellent alterative and cathartic pills, and may be admistered with great advantage in cases of hepatic derangement, in anasarca, and in all glandular diseases.

The following is the favorite cathartic pill of an eminent practitioner of Connecticut :

℞	Extrati Podophylli	3ij
	Hydrarg. Chlorid. mitis	3v
	Olei Cajuputi gtt.	vj

M. Fiat massa, in pillulas lx. div.

Instead of the extract, we have recently employed the *podophyllim*, which is the active principle of the plant, obtained from its root, and which, from the commendation of several of our professional friends, and from the trial we have ourselves made, we are confident will prove to be an addition to our Materia Medica, of great value.

Judiciously administered, it is a superior excitant and alterative, and in appropriate doses, a certain and safe cathartic. Care should be taken not to prescribe this remedy in too large doses, as it is apt to produce griping and nausea when thus administered. This, however, is said to be effectually prevented by combining the medicine with a diffusible stimulant.

℞	Podophyllin	gr. xv
	Zinizberis pulv.	3ss
	Ext. Gentianæ	3ss

M. Fiat mass. et in pillulas xxx div.

These pills may be administered in all cases in which the blue mass or other mild mercurials are given. This remedy has been highly recommended in cases of secondary syphilis, when mercury has been long continued or is from any cause inadmissible. Administered in a full cathartic dose it is declared to have been eminently successful in the expulsion of ascarides; and also, when thus administered and followed in four or six hours with a full draught of olive oil to the amount of four or six ounces podophyllin has proved successful, it is said, in many instances, in the dislodgment and expulsion of large quantities of biliary calculi, with very little pain. Triturated with sugar in the same manner as we have recommended calomel to be prepared, podophyllin is a most excellent laxative and alterative.

℞	Podophyllin	3j
	Sacchari albi	3xix

Mix and triturate until the two be finely subdivided and thoroughly blended. As a mild laxative and alterative, this powder may be exhibited in doses of from five to ten grains. The medicine may be given in all cases where mercurials are indicated.—*Philadelphia Med. and Surg. Jour.*

The Effects of Dentition on Nursing Children. By M. Trousseau. [Clinical Lecture, delivered at the Hotel Dieu. Translated for the Boston Medical and Surgical Gazette, from the Gazette des Hopitaux, Dec. 1855.]

The most elementary questions in medicine are often the least understood. It would seem, at first sight, that we need not much concern ourselves about the trifles which daily swarm beneath the feet of the practitioner; but remember that Stoll has written a chapter entitled *De quibusdam magni momenti minutiis*, and learn early to neglect nothing.

The infant has twenty teeth, the adolescent twenty-eight the adult thirty-two. The evolution of the twenty teeth of the infant is not completed before the thirtieth to thirty-sixth month; but they are only temporary, for, at the age of seven years, he begins to lose them, exchanging them for others which are more durable. This process is normally accomplished at thirteen or fourteen years. Except the great king, who formed an exception to everything, and who was born, it is said, with two teeth, the infant comes into the world with defenseless jaws, and it is not till toward the eighth month that the first milk teeth appear.

But since the laws of nature are capricious, it often happens that one infant has teeth at four months, while another has none at the end of the year; hence no limits can be fixed. Generally, the two middle incisors of the lower jaw first appear, and I anticipate a stormy dentition whenever I see a child begin that process with the upper teeth. These two first teeth appear together, with an interval of twenty-four hours, four days, and sometimes a week between them, but always *together*, remember, and they are the only ones which present themselves in this manner. Six weeks or two months afterwards, the two superior middle incisors make their appearance, not together, but at the distance of eight, fifteen, or thirty days from each other. The process of dentition is thus very rapid for the first two teeth, and more slow for the others.

Meanwhile, two other teeth are about to protrude—the lateral incisors of the upper jaw—very soon, one or two months after the upper middle incisors. Towards the end of one year the child has six teeth, and whereas he began with two lower, he has finished with four upper.

The teeth of children appear in *groups*; *dentes in infantibus calervation erumpunt*: first group, two inferior middle incisors, at about eight months; second group, two superior lateral incisors, at one year, more or less; fourth group, two inferior lateral incisors in the next four months (six teeth in this group, from fourteen to eighteen months); fifth group, four canines, from eighteen to twenty-four months; sixth group, four second and last molars, from thirty to thirty-six months.

The canine teeth appear after the infant has twelve teeth, and when he is from eighteen to twenty months old; their evolution lasts from two to three months, sometimes for ten months, then takes place, and at the age of three years, when those of the last group have pierced the gums (the four second molars,) the process of dentition is finished.

It is not without object that I have spoken of groups; you will see that a knowledge of this arrangement is very important in respect to weaning. It is a fact worthy of consideration, that immediately after a group of teeth has appeared, there is an interval of rest for the child. Profit, then by this interval to wean, for the moment is propitious. Do you know what is commonly done? Children are weaned indiffierently when they have two, seven, nine, eleven, fourteen teeth, no attention is paid to the number. Now, I entreat you to pay close attention to this, otherwise you will lose your little patients by that terrible affection of the intestines, *cholera infantum.*

You will often be consulted as to the time for weaning; never give an opinion, therefore, until a scrupulous examination of the state of the dentition, and do not authorize the mother to wean her infant until it has six, twelve, or sixteen teeth. Good practitioners will never permit a child to be weaned after the evolution of the first two teeth ; the patient is too young ; he is ordinarily eight months old. It is only by careful management that you will succeed after the eruption of the third group; still, if you are strongly urged by the parents, consent, for you have before you a month or six weeks of respite before the evolution of the fourth group. Allow it, then in case of necessity, but never forget that the child has only six teeth, that he is only a year old, and that artificial alimentation will not always be successful.

The most favorable period for weaning, is beyond all doubt, the interval separating the fourth from the fifth group. The child, in fact, is armed with twelve teeth, eight incisors and four molars, and he has before him a tolerably long time of rest, about two months, during which there is no reason to dread any intestinal trouble; and when the canines begin to appear (which group causes the greatest dangers in its evolution,) he is accustomed to his new diet, and prepared for the crisis which he is about to undergo.

Learn, then, to wait until after the fourth group, before weaning. If the health of the mother or nurse, or the circumstances of the family, oblige you to authorize an early weaning, always see that there are six teeth; but if, on the contrary, you are not obliged to yield to considerations of this nature, do not allow weaning until you can count twelve.

Do not imagine that things always go on so regularly. You will see children who have the molars before the incisors, or the superior incisors before the inferior incisors; for although dentition ordinarily takes place in the way I have described, it is no less true that it frequently presents irregularities which greatly perplex the physician who is earnestly watching for an interval of repose. In such a case, do the best which the circumstances will admit of; examine the state of the gums, and have the child weaned immediately after the complete evolution of a tooth, which will probably be followed by a period of repose, during which you will have leisure to guard against evil consequences.

Among the affections which are common to dentition, the most important,

the most grave, and the most obstinate are seated in the alimentary canal. A few days before it begins, the infant is restless, wakeful, cries violently, sucks its fingers, bits the nipple, refuses to feed, if it takes supplementary nourishment, and sometimes will not nurse. Its gums are red, and there is a very evident prominence at the points which the teeth are about to pierce; there is cough, the voice is changed, the mucous membrane of the mouth is irritated. From the moment the child has two teeth, the neighboring gums become inflamed, and the protruded teeth will be surrounded by a ring of red and swollen gum.

If you give mercury to a person who has no natural teeth, but who wears an artificial set, you will not see salivation nor mercurial stomatitis follow. But if the patient have a single tooth remaining which has escaped destruction, the effects of the mercury are manifested around it. The gum surrounding the tooth will inflame, while the rest of the mouth will be free from disease. The same is true with regard to the first two teeth; their eruption causes no affection of the gums, which, however, swell and become red with the evolution of the second and succeeding groups.

In almost all children the process of dentition is accompanied with diarrhœa. This is sometimes moderate, consisting of three or four dejections only, daily, but is frequently excessive, with green stools, resembling chopped herbs or grains of curdled milk, with glairy, and sometimes bloody matter. In certain cases marked tenesmus manifests itself and prolapsus of the rectum. These symptoms, which precede, by several days, the eruption of the tooth, continue, and even last until the entire group penetrates the gums. If the diarrhœa does not cease, you are aware what treatment should be adopted, and what attention should be paid to the diet. You will restrain and mitigate it as much as possible.

Would you advise weaning during this diarrhœa? No, unless the nurse's milk seems to keep up the intestinal flux.

During the summer season, the injurious effects of dentition are chiefly directed towards the intestines, very rarely upon the air passages. Intestinal derangements, fever, peripneumonic catarrah, and other morbid pulmonary manifestations, occur in the winter.

I must warn you against a popular prejudice, which I advise you to oppose on every occesion that offers. You will hear it said again and again, that diarrhœa is beneficial to children; believe it not, for too often it will cause the death of your little patient. Diarrhœa prepares the way for chronic enteritis, and chronic enteritis debilitates and destroys its victims. On the contrary, restrain the intestinal flux, and you will find that the other symptoms are much better borne.

In the same way, it is considered highly advantageous to leave untouched the filth which covers the head of a new-born infant. This ridiculous prejudice no longer exists in England or America; let us do away with it here.

When, during dentition, the evacuations are merely more loose than com-

mon, without amounting to diarrhœa, this slight derivative effort requires no interference, but it should not be allowed to continue too long.

It has been said that convulsons are common with infants whose bowels are constipated, but do not attack those who have diarrhœa. This is not true. Convulsions almost always accompany diarrhœa, and are prevented by a good state of the bowels.

I call your attention particularly to the diet, as a point of the greatest importance. If you neglect caution in this respect, you will have diarrhœa, followed by enteritis, serious indigestion, and eclampsia. Nothing is more common than severe cases of indigestion, aggravated by enteritis, and leading to convulsions; and nothing is more alarming to the parents, who generally lose their senses, and while the domestics or the neighbors run to bring the doctor, the mother, following the advise of some officious gossip, pours hot water over the hands and feet of her infant; he is scalded, and dies from the effects of it. This reminds me of what occurred to an eminent brother-physician, Professor Marjoin, during the course of a typhoid fever, which threw him into a state of profound stupor. They applied to his legs napkins wet with water at a temperature of 158° Fahr. Large escars followed, which were not completely healed for several months.

If convulsions occur, the less you do, the better. The attack, indeed, is most frequently over when you arrive, and although there may be a slight recurrence once or twice during the day, the remembrance of it is only left, the day after. If there have been indigestion, administer a laxative, in order to expel any undigested food; allow the child to nurse but little, give it water with some albuminous substance in solution, and, in an urgent case, a bath, and you will soon see the alarming train of symptoms disappear. Almost any treatment succeeds in the majority of cases, even the infinitesimal doses of that absurd system—homœopathy.

A few Remarks on the Cause, Pathology, and Treatment of Intermittent, Remittent, and Yellom Fevers. By W. R. Richardson, M. D.

The appearance among us of isolated cases of yellow fever, and the increasing frequency of intermittent in our suburbs, demand earnest inquiries into their cause, pathology and treatment.

The treatises which have hitherto been written on these diseases throw very little light upon them, and although they are successfully treated by practical men, in those places where they occur most frequently, the great mass of the profession is wofully ignorant of their real character and importance.

A residence of nearly a year in the valley of the Upper Mississippi, where intermittent and remittent fevers abound to as great an extent as in any part of the United States, and a subsequent voyage to San Juan del Norte, Nic-

aragua, induced me carefully to study and compare the peculiar febrile disorders of these places, and led me to the conclusion that they all depend upon similar causes, and that although modified in severity and type by differences of climate, they raquire nearly the same treatment.

That they originate from identical causes seems evident, from the fact that they are in the same localities, affect the same organs, occur under the same circumstances, yield to similar treatment, and often run into each other; a case of typhoid remittent presenting the symptoms of yellow fever, and assuming an intermittent type as the patient becomes convalescent.

Physiology teaches us that the coloring matter of the *bile* is formed from the red globules of blood, and they are the elements of that fluid which suffer most severely in these diseases; hence the pale, almost cadaveric hue of the lips and skin, the anasarca and ascites which mark the victim of repeated attacks of fever and ague; and hence, too, the passive hæmorrhages from the nostrils, bowels and stomach, (the latter constituting black vomit,) which present themselves in cases of yellow fever and in severe forms of bilious remittent.

We can learn very little of the mysterious and subtle poison, Malaria, which produces these fevers, on account of its imponderable and impalpable nature. I shall therefore pass over its discussion, and proceed at once to inquire into its results.

Like most endemic and epidemic poisons, it acts directly on the blood, producing a disorganization of its red globules, and generating therefrom a large quantity of bile, which passes from the system through the kidneys, skin and other excernent glands of the body. In this way we may account for the congestion of the liver and kidneys, as evinced by pain, tenderness, and a sensation of weight in the region of both these organs, and for the hot. dark and bilious urine which characterizes this class of diseases, as well as for the great amount of bile discharged by emesis and from the bowels, the yellow, often orange hue of the skin and conjunctiva, and the disagreeable bitter taste which is always present in the mouth.

The fever itself is occasioned by strong efforts of nature to relieve the system from the poisonous matter which oppresses it.

In mild cases these efforts are paroxysmal and periodic, result in the partial elimination of the poison through the liver, kidneys and skin, as proved by the abundant flow of urine, the bilious discharges from the bowels, and the profuse perspiration which terminate each paroxysm of intermittent fever. Reaccumulation of the *poison* produces a recurrence of the paroxysm until the blood becomes impoverished, and inflamation and enlargement of the liver and spleen, chronic bronchitis, and diseases of the kidneys result from these repeated internal congestions, or until the malady is arrested by appropriate treatment.

In severer cases they are ineffectual, consequently the fever becomes remittent or continued. In cases of still greater severity, the toxic agent pro-

duces so rapid a disorganization of the blood, that it passes through the mucous membranes, tinges the skin, and, by its deleterious action upon the brain, occasions coma, and in short all the symptoms of yellow fever.

This being the pathology of these diseases, the indications for treatment are plain, and when answered the patient recovers in nearly every case, except the most virulent. The liver, kidneys, skin and bowels must be made to act freely, and the strength of the patient, particularly in yellow fever, must be kept up by as early an exhibition as possible of stimulants, tonics and concentrated nutriment.

At the onset of the diseases, a full dose of calomel, followed by black draught, will frequently arrest its progress, and then the administration of large doses of quinine, at frequent intervals, either alone or combined with morphine, will complete the cure.

Quinine, whose merits in the treatment of these diseases have been greatly exaggerated, acts by causing a determination of the blood to the surface, and thus producing an elimination of the poison through the sudaminous glands; and after the liver has been freely acted on, it is of the utmost use in the treatment of this class of distempers, but not before.

It certainly does not act in these cases as a tonic; on the contrary, its effects are sedative and diaphoretic. The vague ideas which have hitherto been entertained of its *anti-periodic* and febrifuge properties have, I am inclined to believe, tended to prevent inquiries into its real effects.

Tepid baths are of the utmost advantage; cold applications to the head, sinapisms to the feet, blisters to the back of the neck, when symptoms of cerebral congestion occur, are very valuable auxiliaries. Sinapisms or blisters to the epigastrium, and dry cupping over the kidneys when indicated, should be employed.

Acting on these general principles, modifying the treatment to suit the symptoms, will almost invariably result favorably. Out of several hundred patients laboring under every variety of miasmatic fever, I have only lost five or six, and they were *the worst cases.*

Many cases of obscure and hidden miasmatic diseases occur. I have had cases of ophthalmia which resisted ordinary local treatment, but yielding readily to blue pill and quinine.

Medical men ought always to be on their guard for these anomalous cases, particularly in malarious districts. Miasm sometimes obscures common inflammatory diseases, and we not unfrequently find pneumonitis, pleuritis, and rheumatism modified by its intervention.

Trusting that the suggestions I have made may lead to a further investigation of these interesting and important diseases, I close this brief and incomplete account of miasmatic fevers. The microscope, I believe will prove an invaluable aid to this investigation, and will confirm or disprove the theory I have advanced.—*American Med. Gazette.*

Restoring the Drowned.

Marshall Hall directs,—1. That the patient be treated, except in severe weather, on the spot and in the open air, the face, neck and chest being exposed to the air. 2. Place the patient gently on the face, with one arm under the forehead, to enable fluids to escape from the mouth. 3. To excite respiration, turn the patient on the side, apply irritants to the nostrils, and dash cold water on the face. 4. To imitate respiration, replace the patient on his back, then turn the body gently on the side, then on the face again, making gentle pressure along the back, and so alternately about fifteen times every minute. 5. Use energetic friction and dry clothing. He condemns all apparatus, galvanism, warm baths, and loss of time by removal.

Dr. Bell, of Massachusetts, thinks it important, in addition to the above measures, to inject brandy or other diffusible stimulant into the stomach. For want of a stomach tube, a long neck bottle or tube of suitable size, long enough to carry the fluid below the rima glottidis may be substituted. Or it may be done by introducing the fingers deeply into the pharynx and passing the spoon beyond them. He advises, also, an intensely stimulating enema, opening a vein in each arm, hot fomentations, scalding the extremeties, and if relief be not obtained in fifteen or twenty minutes, opening the trachea for inflating the lungs. Both these experienced men hold in contempt the common and long continued practice of humane societies and others, of inflating the lungs without tracheotomy, and seem to doubt whether the air finds its way to the lungs at all in the common practice of attempts to inflate them through the mouth. In this we are persuaded they are mistaken, and it is extremely doubtful whether any improvement has been made upon the ancient practice, if we were governed in our judgment by the measure of success attendant upon the old and the new. It is difficult to understand why the operation of laryngotomy is postponed in cases of suspended animation to a period when its usefulness can hardly be hoped for, considering the simplicity and harmlessness of the operation.—*Memphis Med. Recorder.*

Tannic and Gallic Acids.

Headland considers that tannic acid is better for external, and gallic for internal use. Tannic acid precipitates both albumen and gelatine, but gallic acid does neither. Tannic acid is supposed to be a compound of gallic acid and grape sugar, three atoms of tannic acid being equivalent to six atoms of gallic acid and one of grape sugar. Tannic acid may be decomposed in the stomach by the conversion of the grape sugar into carbonic acid and water, setting gallic acid free, which passes out into the secretions after exerting an astringent action on various organs and tissues. As tannic acid

loses weight by this decomposition, it follows that a dose of gallic acid produces a greater effect than an equal amount of the other. Gallic acid does not precipitate albumen, and therefore is of little use as an external astringent; but a mixture of a solution of gallic acid with one of gum will precipitate albumen, although neither will do it separately. It is probable that gallic acid may unite with saccharine matter in the blood, and thus acquire an astringent power which it does not exhibit externally, because then isolated. These two acids, and the substances which contain them, are used in diarrhœa, and hemorrhage. To diminish sweating, gallic is inferior to sulphuric acid, but to act as a remote styptic, it is preferable to the other. Tannic and gallic acids diminish the secretions generally. They are very useful in cases of hœmaturia, where sulphuric acid is all but useless.—*Memphis Med. Recorder.*

Treatment of Carbuncle.

Prof. Syme advises, as the only effectual method of cutting short its advance, the making of crucial incisions completely through the whole extent of inflamed skin. Immediately on this becing done, the redness disappears and the pain ceases, the constitutional disturbance soon subsides, and the affected skin, unless already deprived of its vitality, quickly resumes its natural thickness and healthy action, so as to remove all obstacles from the healing process. He considers the application of caustic the extreme of absurdity. Dr. Blackman, of Cincinnati, says, on the contrary, that his patients have derived the greatest benefit from the application of caustic potash. His rule is, in addition to the incisions, to convert the whole of the diseased cellular substance into a saponaceous compound, and to extinguish the inflammatory action by means of stimulants—quinine—a generous diet, &c.,—and he strongly recommends this treatment. Prof. Syme applies the crucial incision, also, to common boils in this early stage.—*Ib.*

Irrigation in Phagedena.

A successful experiment has been tried in Guy's Hospital in the treatment of phagedenic ulcers by constant irrigation. The affected limb is placed on some water-proof material, with a reservoir above the bed supplied with warm water, and by means of an elastic tube a stream is kept constantly flowing over the surface of the sore. The discharge is thus washed away as soon as formed, and the ulcer assumes the clean pale appearance of a piece of soaked flesh. The theory is, that phagedenic action is a process of local contagion—the *materies morbi* by which the ulcer spreads being its own pus. Nitric acid relieves the difficulty less perfectly, and with greater suffering, by decomposing the morbid discharge; but to be effectual, the whole surface of the ulcer must be destroyed to a considerable depth.—*Cincinnati Med. Observer.*

NEW PUBLICATIONS.

The Dissector's Manual of Practical and Surgical Anatomy. By Erasmus Wilson, F. R. S., author of a system of human anatomy, etc.; the third American, from the last revised London edition; illustrated with one hundred and fifty-four wood engravings; edited by William Hunt, M. D., Demonstrator of Anatomy in the University of Pennsylvania. Philadelphia, Blanchard & Lea, 1856.

The Practical Anatomist: or The Student's Guide in the Dissecting Room. By J. M. Allen, M. D., late Professor of Anatomy in the medical department of the Pennsylvania College; Fellow of the College of Physicians; Member of the Academy of Sciences, etc.; with two hundred and sixty-six illustrations. Philadelphia, Blanchard & Lea, 1856.

To the enterprising publishers, through the politeness of Messrs. Raymond & Selleck, we are indebted for these handsome volumes.

Anatomy is so stable a department, and is so thoroughly taught in the schools, and, moreover, so little that is new, unless it may be in minute microscopical developments, has been brought to light, latterly, that works, additional to the numerous learned and finished treatises, already extant, as those of Bell, Cruveilhier, Quain, Wilson's "Human Anatomy," the Surgical Anatomy of Maclise, etc., seem scarcely called for. Nevertheless, modifications and improvements in the modes of instruction, in the association of departments of the subject, and in the manner of displaying textures, we have no doubt may be made, which will be advantageous to the learner and convenient to the teacher. In reference to the former of the above productions, but little need be said. The reputation of

the author, Dr. Wilson, is so established as an accomplished anatomical writer, and his works have been so generally approved, that further praise would be scarcely less than fulsome. The additions and comments of the American edition are not inappropriate, and may, at least, have the good effect of fixing the attention of the reader more earnestly upon the several topics referred to, and of inducing more critical search, in the dissecting room.

The author of the latter seems to have fallen upon a happy arrangement, and an intelligent mode of exhibiting the various regions of the body. He has shown, with remarkable clearness, not only the difference between the "*student in the lecture room and the student in the dissecting room,*" but he has called attention to the comparative amount of anatomical knowledge obtained in each. Desirous to give a special direction of the learner's attention to those portions of the science, which are more immediately connected with practice, and "impressed with the conviction that the dissecting room affords the greatest facilities for acquiring that knowledge which the student, when he becomes a practitioner of medicine, will most need," his aim has been to supply him with what "may be regarded as *a text book in the dissecting room.*"

More effectually to carry out his purpose of connecting anatomy, as intimately as possible, with practice—to make it more strictly a constituent—in a word, the substratum, both of medicine and surgery, avoiding "*mere arbitrary rules* for exposing the parts, in any region," he has expended much time and labor on the position and actual relation, as well phsiological as anatomical, of parts, as "naturally met with, when the student" is "desirous," as most certainly he aught always to be, "of studying every thing contained in" the particular "region."

Actuated, still, by the same ardent wish to make his book as completely practical, and, therefore, useful as can well be, he has "not hesitated to discriminate, to a certain extent, as regrards practice, between different regions and organs." That the learner may be benefited, in this particular, to the utmost, he has "dwelt longer on some parts than others, being governed,

partly by what he conceives to be the relative value and importance of the knowledge of any part, or organ, to the student, and partly by the difficulty he has observed students to have in dissecting and understanding them." We regard both as well calculated to subserve the purposes for which their authors respectively designed them. The artistic execution of each, including the numerous illustrations, cannot be well improved—in every particular they are just what we should expect from the publishing house of Blanchard & Lea.

To be found at Raymond & Selleck's, in this city. Price, $2,25. K.

Remarks on Vesico-Vagina Fistule, with an account of a new mode of suture, and seven successful operations. By N. Bozeman, M. D., of Montgomery, Ala. Louisville, Hull & Brother, Main street, near Fourth. 1856.

We have perused Dr. Bozeman's Essay with care, and it gives us pleasure to say, with much satisfaction—we hope, profit. The malady of which he treats, while it is loathsome and productive of perpetual suffering to its unfortunate subject, has, until quite recently, held surgery and the most learned operators at defiance. Any measure, therefore, which art and skill can devise, that offers even a distant prospect of success, merits the approbation of all who, would mitigate or relieve physical suffering and augment the happiness of our race. To cure this distressing abnormity, the professional mind has not been remiss in earnest research nor in the construction of appliances ; as a consequence, sundry modes of procedure have been instituted. Of these, some bear the impress of genius and refined conceptions of mechanism, while others are illy adapted, and wanting in principle, or are rude, and of doubtful efficacy, theoretically. Two modes of operation—both ingenious—divide professional attention at the present time, and rival each other in their demands for popular approval. These are, first, that of Dr. J. Mairon Sims, late of Montgomery,

Alabama, now of New York city; and, second, the one so fully set forth, with illustrative examples, in the production, of which we are speaking. The comparative merits of each, and the advantage which one may possess over the other, time and more extended experience, alone, can determine.

That both have merits, few will question. The former has the advantage of precedence and more frequent trial; the latter, as far as we are informed in regard to the proportional success, claimed for Dr. Sims' operation, has the advantage, in ratio of completely curative effect. Indeed, if the reader impose implicit faith in the declaration of Dr. B.—and certainly, no good reason appears why he should not—it is believed he must conclude that *his* operation has, thus far, been attended with more perfectly successful results than has attached to any operation devised for so grave a lesion, recorded in the annals of surgery.

We are pleased with the kindly spirit and the candor with which the author speaks of the merits of others, who have labored, and are still laboring, in the same field of research, as also with the manly independence manifested in his mode of enunciating his reasonings and procedure, in the treatment of this forbidding disease.

We congratulate Dr. B. on his unexampled success, and hope no misadventure may occur to detract from the reputation his ingenuity and skill have conferred upon him. K.

Encysted Osseous Tumors, or a Thin Secreting Membranous Cyst developed in cancellous structure of bone and surrounded by a thin bony wall. By Alden March, M. D., of Albany. Albany. Van Benthuysen, printer, 407, Broadway. 1856.

Manographs on unusual, obscure and therefore, difficult varieties of disease, in whatever branch of the healing art, are among the most profitable kinds of medical literature. If, in their composition, the writer has appropriated the time necessary to investigate his subject with thoroughness, to search authority with care and fairness; if the facts and circumstances thus brought out are distinctly enumerated, and moreover if

pertinent cases, in illustration, whether in pathology or practice, are significantly presented, all would seem to be accomplished that reason can expect or curiosity demand.

The authors of such productions have an advantage, in these several particulars, over the writers of more general treatises, devoted to a variety of subjects. The mind, concentrated on a single topic or individual department, acquires an acuteness and a power of application and analysis, quite incompatible with its diffuse application to, and investigation of a variety of subjects, within a limited period of time.

The reader, likewise, is benefitted in an equal ratio; his conception of the principles and deductions involved, being quickened and enlarged in proportion to the time appropriated and the attention converged upon the matter in question. In the essay before us, Dr. March has manifestly studied his subject with commendable care, not only in its pathological characters, but also as regards it therapia and its bibliography. In reference to this last, however, he will allow us to suggest that he might easily, by a little more extended research, have enlarged his acquaintance with the literature of his theme and furnished his readers with more copious references. In regard to forms of disease as grave as that of which the author treats—maladies requiring complex and difficult, not to say dangerous surgical operations—somewhat unique and of rare occurrence, the practitioner, and especially the junior member of the profession, requires to have spread out before him, all that is known on the subject. It is as much, often more, through the recorded experience of colaborers, that the medical man is qualified to benefit his patients, and confer honor upon his own reputation and upon science, as through what he himself may have seen or performed. But we would not pursue this train of thought further than to remark, as an expression of our own judgment, that, in such matters, it is incumbent upon those, who have met them, in publishing the results of their own experience, and modes of procedure, to associate it with a full statement of the observations and reasonings, of all their cotemporaries as well as their predecessors.

Finally, we regard the essay of Dr. March as a very creditable performance, and cheerfully recommend it to the careful study of all who would accumulate informatien on the interesting subject of which it treats. K.

EDITORIAL AND MISCELLANY.

The Medical Department of the Michigan University.

A sincere desire to contribute to the advancement of Medical Science in our own State, prompts us again to speak of the Medical department of our University. We believe it to be an undeniable fact, that the profession of the State as a whole, has not extended to that department the cordial hand of fellowship, or those expressions of regard for its prosperity, which its standard of education, and the advantages offered, may justly claim. The cause of this state of things—attributable, in part, to sectarian influence, political relations, and legislative enactments—is not essential to our present purpose. There is not a member of the profession in this State, however obscure in his field of practice, who should not feel a deep interest and a just pride, in the elevation and perfection of that department.

Large accessions have been made to the profession of the State within the past few years, the majority of whom are applying the best energies of early manhood in laying the foundation of professional eminence. They are now the working men of the profession, and stimulated by the aspirations of ambition, are those to whom we must look for the elements of progress.

Now, by what means is their co-operation to be secured for the promotion of the interests of the University? For we believe that without their influence and support the medical department cannot flourish. Some of them tell us that the great scheme of which it forms a part is impractical—a Prussian exotic, that cannot be made to bud and blossom in such a soil. Others tell us that the institution is in the hands of an old

fogy monopoly, that has become self-satisfied with the honor and glory, so long as supported by a salary of *fifteen hundred* a year. They point us to the catalogue for proof that the medical department is not in a flourishing condition.

It will be remembered that Dr. Tappan was appointed to the Chancellorship of the University, against the strongest opposing influences of many, who are now among his warmest friends. He found the school richly endowed and yet struggling against financial embarrassment, and worse than all else, with the disturbing forces of sectarian feuds and schisms. It is not strange then that any plan, which he might propose for the best execution of the designs of government, or the development of a system of education commensurate with the endowment, should be looked upon with jealously and distrust. But in view of what has been accomplished by pre-eminent ability, energy and foresight, who can bring a successful argument against the practical working of a system analagous to, if not identical with the great plan of the Prussian system, which the indefatigable Chancellor has chosen for a model? But it is a fact, nevertheless, that the medical department, although in the hands of a Faculty distinguished for ability, has not made that advancement and attained a rank among the medical colleges of the country, which its financial resources, and relation to a University organization demand.

By reference to the Catalogue, we find that during the session of 1852 and 53—the year of Dr. Tappan's appointment—the medical class numbered 162, while the present class numbers but 161. With all the advantages of a lengthened term of study, and the inducements of gratuitous instruction, the facts exhibit a decrease rather than a steady and rapid growth. By logical inference then, we may assume, that with its present advantages *it has reached its maximum.* It has attained the position and rank of a country school—a mere tributary to more distinguished eastern colleges.

What is the history of all *country* medical schools? Where are Fairfield, Geneva, Willoughby and Laporte ? *Requiescat in pace!* Where are Pittsfield, Woodstock, Castleton and the University of Virginia? Just alive, but eking out a feeble ex-

istence, and for the most part only auxiliary to the flourishing schools of cities. What gives the preference to one school over another? In other words, what makes one school better than another? *Superior advantages*, the chief of which, is *clinical instruction.* Clinical and hospital advantages furnish the element, which has given the schools of the old country—especially of France—a pre-eminence over those of our own country. As well may men talk of teaching mathematics without a blackboard, as to teach the science of medicine without those facilities for demonstration, which are now afforded by clinical advantages.

What student would be satisfied with his knowledge of anatomy, unless obtained by practical lessons from the dissecting table ? How is he to acquire a thorough knowledge of chemistry, except by practical experiment ? The same is true of practical surgery. The surgical clinique furnishes the field for practice, and applies the principles of the science not upon the dead subject, but under circumstances identical with those, which are to characterise practical experience. The great responsibility connected with this branch, in a medico-legal point of view, demands that every facility for thorough, radical teaching, should be made available. The thousands of paupers in our cities, or those who cannot afford to pay for the operations of surgery, appear before the class, with deformities, lacerations, fractures, in short with every variety of accident, and receive the benefits of surgical science for the advantages, which they offer to the student.

Now, what is true with regard to the *clinique* of the medical department of our University ? *It is unworthy the name.* With all the competency, energy, and painstaking of the Professor of Surgery, the students do not see as many practical operations, during the whole session, as are witnessed during *two weeks*, in many city schools. This state of things, we are informed by our correspondent at the University, is growing worse. The fact is readily explained, for, as the various sections of the State are being supplied with accomplished young surgeons, the otherwise clinical patient, falls into good hands nearer home.

When we add to the surgical clinique, well directed hospital instruction, in which the other departments of medical science are practically illustrated—advantages that can only be obtained in the larger cities—is it strange that country schools should languish, and, sooner or later, collapse? Here is the city of Detroit, with a population of nearly seventy thousand, within less than forty miles of the seat of the University, and offering every facility and abundant resource for clinical and hospital advantages. *Why, then*, should it not be the field for the progressive development of the medical department of the University? Why not occupy ground that must otherwise be occupied and cultivated by a rival medical school? We believe that no one, who is not many years behind the age, can oppose such a measure, unless actuated by personal and *selfish* considerations. What is their objection? They say "it cannot be done, because the conveyance of the forty acres of land for the site of the University, was made conditional." But, we do not propose to change the *seat* of the University, we only ask that one of its departments shall be placed where it properly belongs, where it will flourish and become an honor to the University and to the State. The seat of the University will still retain the archives of the medical department, and will bear the same relation to that branch, that Harvard University bears to its medical department *in Boston*, or the Western Reserve College to its medical department *at Cleveland*. We have the best legal authority for assuming that the conveyance of land for the seat of the University will, in no degree, become vitiated by such a change: but as the location was made by the Legislature, it will only require an act of that body, to authorize and give the proper form to such a measure.

What is the united voice of the profession throughout the State respecting this subject? In our visits among the physicians, in various sections, during the past six months, we have taken special pains to elicit an opinion, and all express surprise that it has not been done before, if it can be done at all. The answer is, "Detroit is the place for the medical department, and it will never amount to any thing better than a third rate school in its present location." I met with one exception, and

afterwards learned that the Doctor, to whom we allude, *owned a village lot in Ann Arbor.*

We are happy to know that the members of the Medical Faculty, *with but a single exception*, are not only in favor of it, but are anxious to have it accomplished without delay.

The future history of the University, the honor of the profession, and the interests of medical science, imperatively demand it. R.

Hygienics.

The great value of accurate information in regard to hygienics, embracing, as it does, a knowledge of all those measures, through which the various "structures and functions of the body" are preserved in a normal condition, and their perpetual well-being, a state of sound health, sustained, will be readily conceded by all who reflect on the subject. Such information is not essential to the medical teacher and the practicing physician alone; it is equally beneficial and necessary to every individual in society. To apply hygienical doctrines to practical effect, neither a profound knowledge of technical philosophy, nor, as is too frequently alleged, and especially by the superficial, are large attainments in anatomy and physiology indispensible. Neither the one nor the other, however, is to be discarded.

Certainly, such knowledge will enable an individual to be more strictly scientific in his hygienical reasonings and practices ;—better informed, most truly he will be more competent, but, we repeat, it is not indispensible. What, then, are the qualifications necessary to an intelligent application of hygienic rules, in the every day pursuits of life, to their legitimate uses—the conservation of health and the prevention of disease ?

We answer, a conviction that certain matters, received into the economy, by the stomach, either as food or drink, through the circulation, as vitiated air, deleterious gasses and emanations; influences, brought to bear upon the exterior of the body, as vicissitudes of temperature, variations in the barometrical and

hygroscopical states of the atmosphere, and insalubrious impressions, operated upon vital organs or upon the entire system by inordinate mental labor or perturbation, are injurious. Also, a knowledge of facts and results, derived from observation of hurtful causes and their pernicious consequences, or from perusing the productions of the learned and common sense, and carefulness in appropriating such knowledge to practical purposes. With this conviction, this knowledge and this modicum of common sense, associated with sufficient self-regard to insure proper personal care, any individual may apply the principles of this department of knowledge to the purposes for which it is designed, with a fair proportion of success. But is not an acquaintance with chemistry and physiology essential, absolutely so, to an accurate understanding of hygiene and the right use of its principles in practice? Assuredly, not more so than a learned familiarity with the arts and cunning of the wily politician, to an honest exercise of the right of suffrage, or an intimate acquaintance with polemical theology, to the conscientious practice of religion.

Nor is this to depart from practical procedure, in all or most of the departments of human knowledge and effort. There is, there must be a community of faith, a confidence in the veracity of the well informed and the skillful, that serves instead of universal scientific attainment, and reveals, as it were, intuitively, the uses, to which facts and principles may be applied, and without which, knowledge would be powerless and wisdom but a name.

But hygienical facts and doctrines are not less essential to the cure than the prevention of disease; for although hygiene has been denominated the "medicine of healthy individuals, it is still applicable and even indispensible to invalids, and is often of more service to them, than medicine itself, since, while the efficiency of many remedies may be doubtful, the propriety of hygienic measures is universally admitted." How frequently is it, that acute forms of disease terminate favorably, "without a resort to the materia medica." How often too, that the most scientifically arranged therapia is signally inefficient, if unassociated with an intelligent hygiene. Are not the gravest dis-

eases frequently abridged in duration or mitigated in severity, and the causes of fatal epidemics rendered inert or inoperative by the institution of properly adjusted sanitary measures—cleanliness, ventilation, or the removal of some offending cess-pool or stagnant water, whence emanated the seeds of death, which, otherwise, notwithstanding the efforts of competent medical advisers, and abundance of remedies, would have continued to destroy. And are not comparatively trivial maladies often transformed into the most malignant, nay fatal, by neglect of such measures.

Few, it is believed, will question the doctrine, set forth in our Vth article, offered by a writer of enlarged observation: "The crowding of patients into narrow, ill-ventilated apartments, the contamination of the air, the absence of cleanliness, the want of suitable clothing, exposure to cold and wet, errors in diet, mental depression, fatigue, collectively, invariably produce terrible effects ; whilst, in a large number of acute affections, of the severest kind, recovery occurs without a resort to any active remedy, merely under general hygienic measures."

That our readers, as well unprofessional as professional, may avail themselves of systematic information in this fruitful field of medical research, and especially to bring it more immediately before the observation of those members of the profession, whose engagements in laborious practice will not allow them to peruse labored productions, which treat of it exclusively, our friend and experienced collaborator has kindly offered us a series of papers from chapters of an unpublished work, and which are devoted to this too much neglected department.

They are designed to include most of the more common, and therefore important, facts and results, as well as many of the rarer and complex principles and doctrines, that belong to rational hygienics. Convinced of the existing inattention to the subject, and the numerous errors and pernicious practices, that obtain, in consequence, no pains will be spared to make it acceptable to the professional, and profitable to the non-professional reader. While the writer will aim at setting forth, *mainly*, the legitimate doctrines and rules of hygienics, in a form somewhat methodical, he will not hesitate to expose the

errors and sophistry of many of the popular teachings of the present day. In performing this portion of his task, the fallacies of the sciolistic itinerant, as also, those of more or less of the novel systems of medicine, so pompously imposed upon the world in these latter days, will receive their appropriate share of attentiun.

There will be no sycophantic concessions to quackery, nor will a just tribute to scientific hygiene be withheld, from whatever source it may be gathered. In a word, in seeking to popularize the subject, by presenting its numerous topics in a familiar style, and as nearly as may be, divested of technical phraseology, no fact will be intentionally omitted, nor result overlooked, that is essential to the illustration of a principle or the development of truth. K.

Our Subscription List.

During the last month we have made large accessions to the record of our subscribers, and among the number we have added also to our list of contributors, *not a few*, who will render essential aid in laying before our readers, entertaining and practical papers relating to the various departments of our professional pursuits.

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Perigrinations.

We had intended to record in this number some impression of a late trip into the interior of the State, especially pertaining to our visit at Ann Arbor, Marshall and Grand Rapids, but have passed them over to our next number. R.

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MONTHLY REVIEW.

VOL. II. FEBRUARY, 1857. NO. 6.

ORIGINAL COMMUNICATIONS.

ARTICLE I.—On the Links Connecting the Vegetable and Animal Kingdoms.—Continued. By HENRY GOADBY, M. D., F. L. S.

The plants in which circulation can be seen are of such surpassing interest, to every one possessing a microscope, that many persons carefully cultivate them, for the purpose of examination themselves, and to show to their friends the most surprising scene the microscope has yet revealed to man. For ourself, we may say that prior to our visit to this country, so long as we had (what here we have not known) a *fixed residence*, we were never without a beautiful supply of *Chara vulgaris*, *C. translucens*, *Nitella*, and *Vallisneria*.

We think it may be serviceable to communicate the best mode of preserving Chara for constant reference, by quoting from Mr. C. Varley, as published by him in the *Transactions of the Society of Arts*.

He says, "in cultivating these plants, it is only necessary to take notice of the circumstances under which Chara naturally thrives, and to imitate them as nearly as practicable.

"Firstly. The Chara tribe is most abundant in still waters or ponds that never become quite dry; if found in running

water, it is mostly met with out of the current, in holes, or side bays, where the stream has little effect, and never on any prominence exposed to the current. If the Chara could bear a current, its fruit would mostly be carried on and be deposited in holes ; but it sends out from its various joints very fine long roots into the water, and these would, by agitation be destroyed, and then the plant decays ; for although it may grow long before roots are formed, yet, when they are produced, their destruction involves the death of the plant. In order, therefore, to preserve Chara, every care must be taken to imitate the stillness of the water, by never shaking or suddenly turning the vessel. It is also important that the Chara should be disturbed as little as possible, and, if requisite, it must be done in the most gentle manner, as, for instance, in cutting off a specimen, or causing it to descend in order to keep the summit of the plant below the surface of the water.

"Secondly. Imitate the freshness of the water, by having an extent of surface which it is requisite to skim frequently, or suffer it to overflow by the addition of more water. These precautions being attended to, a clear bright surface is kept. It is also desirable to change a small portion of the water, but this should be done without agitation. The best vessels for cultivating this plant in, are either wide pans, holding three or four gallons, or glass jars a foot or more high ; into these the Chara may be placed, either with clean water alone, or a little earth may be sprinkled over it, so as keep it at the bottom, or the bottom may be covered one inch with closely pressed mould, in order that the water may be put in without disturbing it ; on this lay the Chara, with a little earth over the lower ends to fix it. Causing the water to overflow is the readiest way to skim the surface, though dipping out gently will do ; but in all cases of pouring in water, hold something, such as a saucer or flat piece of wood, to receive the pouring, and make it spread, instead of allowing it to descend at once on the surface. Pans in the open air, nearly full of water, will be kept in order by the wind and rain, only taking care to supply the deficiency, (the effect of evaporation,) and to change some of the water if it be considered necessary."

The vessels kept in-doors have a film which is always forming on the water, and which requires to be frequently removed.

"Thirdly. Imitate the equal temperature of its native holes, by sinking the pan a little within the earth, but, during frosty weather, keep the pan in-doors, and at the lower part of the house, as this situation is generally the most uniform in its temperature.

"The Chara will live in any temperature above freezing, and grows quicker as the warmth increases, but above the earth, as outside of a first floor window, it will not bear the daily difference between the mid-day sun and the cold of sun-rising.

The glass jars I keep within the house, as nearly uniform in warmth as convenient.

Similar care is requisite for Vallisneria, but the warmest and most equal temperature is better suited to this plant. It should be placed in the middle of the jar, in about two inches deep of mould, which has been closely pressed ; over this, place two or three handsful of leaves, then gently fill the jar with water. When the water requires to be changed, a small portion is sufficient to change at a time. It appears to thrive in proportion to the frequency of the changing of the water, taking care that the water added rather increases the temperature than lowers it.

The natural habitat of the Frog-bit is on the surface of ponds and ditches ; in the autumn its seeds fall, and become buried in the mud at the bottom during the winter ; in the spring these plants rise to the surface, produce flowers, and grow to their full size during summer. In order to keep them for microscopic purposes, large pans, with earth at the bottom, will preserqe them through the winter, and if left out of doors during the cold months, the pans should be sunk into the ground to preserve the buds from the extreme cold."

The foregoing constitutes the most valuable and practical information on the subject to which it refers, that has yet been published ; and, notwithstanding the *invariable* lower winter temperature of a large portion of the United States, we believe the instructions here offered will be found equally efficaceous for this country.

By far the most interesting and instructive objects to the examination of which the microscope can be employed, is *the circulation of the blood in a living animal.*

It is essential to make a judicious selection of the creature to be employed, a certain degree of *transparency* being essentially necessary.

For this purpose, small fishes have been used, the tail alone being submitted to the instrument. It is necessary to confine the creature in a vessel containing water; the older microscopes were fitted up with a number of small glass tubes, into one of which the fish was to be placed; water was added, and the vessel corked. To this plan there are many objections; an air bubble is sure to be corked up with the fish, and this is generally found occupying the upper surface of the field of view, and is, of course, *impenetrable;* but the objections to this plan may be disposed of by referring to the difficulty of definition on account of the *sphericity* of the tube.

For other, and larger fishes, such as would maintain their vitality for a sufficient time *out of water*, (eels, carp, &c.,) a brass fish pan used to be provided with a ribbon attached to the pan for the purpose of lashing the fish, and a hole was cut through the brass pan at the part where the tail might be supposed to lie, to transmit light.

In later times, since the introduction of the compound Achromatic microscope, other animals amongst the Vertebrata, have been discovered to show circulation; thus the larva of the frog, (*tadpole,*) and the common fresh water newt, show this object very finely. In the tadpole, the circulation can only be seen in the *tail*, but in the larva of the water newt, it may readily be seen in the *tail*, *feet*, and *gills* (*branchiæ,*) the latter being a *most magnificent sight!*

In our experience, however, no circulation that we have seen approaches that in the web of the Frog's foot!

Here, the blood can be seen coursing through the three systems of vessels, the arteries, capillaries, and veins at the same instant of time, if power sufficiently low be employed—(an inch object glass.) The arteries, always seen nearest the toes, may readily be distinguished from the veins, by the *paler color*

of the blood, the peculiar *velocity* of the circulation, and the contrary direction (as compared with the veins,) in which it moves. In the capillaries the colored corpuscles of the blood follow each other at a steady rate of speed ; the channels are narrow, and extremely tortuous ; every impediment of a mechanical kind is offered to its transmission through these vessels.

While gazing on the *capillary* circulation the colored corpuscles will be frequently seen to attempt to pass round one of the numerous round turns, or bends, of which these vessels present so many examples, *but it cannot pass*—it is momentarily arrested—and other corpuscles that make their appearance find the way stopped. What is to be done ? the impulse of the heart is felt behind urging other corpuscles to advance, until the one that has become wedged *elongates itself considerably*, and, being narrower in its transverse diameter, passes with ease. Not unfrequently a corpuscle will be seen, elongated, and occupying both sides of the bent vessel, where it will remain for an instant, then gradually squeeze its way through. Such sights as these clearly demonstrate the great elasticity of the colored corpuscle, which would have remained unknown but for the microscope.

But the capillary circulation demonstrates another equally beautiful and instructive fact, viz : the presence of the *colorless* corpuscle ; these may be seen within the vessels, not in the midst of the circulation, but *sticking by the sides of the vessels.* There they stand, until a *colored* corpuscle strikes against one of them and puts it in motion, which continues as long as the impetus of the blow lasts. Sometimes the blow is *heavier*, or given in a particular direction, so that the colorless corpuscle is struck upward into the stream of colored corpuscles, where it always remains for a greater length of time than in any other situation.

The circulation in the *veins* presents only a steady, equable stream ; flowing on at the same uniform rate of speed, by which it is greatly distinguished from the arterial circulation.

We have endeavored to represent frog's foot by a figure. (See fig. 124.) The arrows denote the direction of the circulation, which is in this wise : an artery terminates in a

capillary, which is associated with a plexus, or net work of such vessels; these after various meanderings, and tortuosities, terminate in a series of veins which, small at first, gradually grow larger, as shewn in our illustration. Certain black spots, many of them *stellate*, are seen on the surface of the skin—these are *pigment cells*, in other words, the microscopical analysis of the mottled, or colored skin of the frog.

Fig. 124.

In the class Mammalia, there is only one animal in which circulation can be seen at all, and even that is *far from good*—viz: the wing of the Bat.

Amongst the *invertebrata*, many rich and beautiful scenes of this kind are to be found. The common Water-flea (*Monoculus*,) the arborescent Water-flea, (*Daphnia pulex.*) the fresh water-shrimp, and some species of Water-hog (*Oniscus*,) all show circulation of the blood, through the most transparent portions of their bodies. Amongst these, Daphnia pulex takes pre-eminent rank! In this tiny crustacean the translucency is so complete that the muscles of the eye, the brain, optic nerve, and entire nervous system, together with the alimentary canal, are most distinctly visible. The heart, composed of an auricle and ventricle, on the dorsal aspect of the body, forms a most prominent object; whilst the stream of uncolored corpuscles, which steadily circulates through and around every organ of the body is truly magnificent!

The legs of many species of spider are transparent enough to shew the circulation, but these are inferior to many insects

in their larval condition, and all of them aquatic. The larva of the plumed gnat, the *Agrion puella*, a minute and delicate Dragon fly, called in this country, the "*Devil's darning needle*," and the larva of *Hydrophilus caraboides*, all show circulation, but the beauty of them all is the aquatic larva of *Ephemera marginata*, or day-fly! In this creature, as transparent as glass, the scene presented to the spectator is of wondrous beauty! The heart, and all its surprizing mechanism is laid bare, and he who beholds it for the first time is perfectly appalled and astounded at the marvellous revelation before him!

In the Curstacea, no less than in the *Arachnida*, (Spiders) and Insects, there are *arteries* easily demonstrable by the injecting syringe, but no *veins;* their place is supplied by a series of large, loose sacs, to receive the venous blood, and called *venous synuses.* The parieties of these sacs are so diaphonous and delicate that the ordinary process of dissection fails to reveal them, and we must look to the *injecting syringe* to assist our inquiries. For this reason (delicacy of the coats of the venous synuses,) the circulation of the blood in insects, *Arachnida*, and Crustacea, appears to pass, every where in the free space, amongst the organic structures, not being bounded by, or confined in vessels, and we have read statements of authors to this effect—that none of these creatures possess *veins*—a perfectly truthful statement, although, as we have seen, they have a structure, more sparcely developed in quanity, but infinitely larger in volume, to subserve the same function.

The heart, in Ephemara, is divided into eight distinct chambers, each being separated from the other by a valve, which opens *upwards* (towards the head). The entire organ lies bathed in a large venous sinus, a fact which we long ago demonstrated in a preparation of the dorsal vessel of Blatta Americana, now in the Museum of the Royal College of Surgeons, England. In addition to the *internal* valves, each chamber possesses a pair of valves at the lower portion, which open *outwardly*—into the venous sinus. In the insect in question, the whole of this apparatus is distinctly visible under the microscope; these valves, too, can be seen to open to admit the corpuscles; the internal, central valve admitting

blood from the chamber below, the lateral valves, from the venous sinus. It very commonly happens that more blood passes into a given chamber through these three sources, than it can contain ; and it is a very pretty, no less than an exciting sight, to watch corpnscles which are certainly fairly *within* the chamber, sent out with great decision at the closing of the valves respectively.

The circulation, as generally seen throughout the body, offers no exception to what occurs in the animals already referred to ; in all, the apparent want of veins is conspicuous.

So far, then, we have endeavored to show similarity, approaching to identity, in the circulation of plants and animals ; in both kingdoms, vessels are distinctly formed for the conveyance of the circulating fluids in the higher orders, whilst in both they are more or less deficient in the orders of lower organization.

We must now examine the fluid portion of the blood—liquer sanguinis. We have already remarked that as a *rule*, this cannot be seen under any circumstances, but there are some exceptions; examine the blood of the *Annellides*—the red blooded worms—and what a curious fact presents itself ! The *corpuscles* of the blood are *colorless*, and the red fluid in which they swim is the liquor sanguinis ! But in none of the animals already cited can it be at all seen, and we incline to the opinion that this may be regarded as *prima faciæ* evidence that, although *invisible*, it equally exists in plants. Our labors have hitherto been directed to prove the surprising conformity and uniformity which subsists to so great an extent between the two kingdoms, and, if we have sceeeded at all, it leaves little reason to doubt that the analogy and close resemblance between the vegetable and and animal kingdoms is perfect here, as elsewhere. We acknowledge that this is a very difficult question, the more especially as the microscope fails to assist and guide us to a conclusion ; probably it can only be left to conjecture, and opinions may continue to be as diverse as they have hitherto been. We have, however, carefully collected the evidence, and placed it fairly before our readers, and cheerfully leave them to draw their own inferences.

To be Continued.

ARTICLE II.—Chapters from an unpublished work on Hygieine. By A. R. T.—CHAPTER I.—CONTINUED.

THE HAIR.

Frequent washing of the head in pure water, or soap and water, very much contributes to the vigor and beauty of the hair. The opinion that frequent washing produces grayness is entirely without foundation. As for the various wonderful preparations for increasing the growth of the hair, they are pretty much on a par. The numberless scented oils which are sold under the names of *Huile Antique, Macassar Oil, Chinese Hair Oil,* &c., &c., are principally objectionable on account of their filthiness. In almost all instances they are useless, and they soil the bonnet, the hat, the linen and the collar of the coat, catch dust, and are altogether abominable. Still, in a few rare instances, they may be useful, *temporarily,* where the hair has been rendered rough and dry from neglect or sickness. The surest way to preserve the hair in a healthy condition, is to keep it clean, by occasional washing, and the assiduous use of the comb and brush. When, in consequence of neglect or sickness, the hair falls out rapidly, some stimulating, or even spirituous, lotion is often of use in checking its fall. Tincture of Cantharides (Spanish fly) and Aqua Ammonia, or Water of Hartshorn. have proved the best remedies in such cases. An excellent cleansing lotion for the hair, when it is unhealthy and inclined to fall, is the following :

Tincture of Cantharides, two ounces.
Water of Ammonia, or Hartshorn, four ounces.
Alcohol, two ounces.
Pure water, eight ounces.

A tablespoonfull of this may be added to half a pint of cold water, and the head thoroughly washed with it, either twice or thrice a week, or every day, according to the urgency of the case. The falling out of the hair will be generally checked in a week or two, and a new crop begin to appear ; but the remedy should be continued for some weeks after. The above mixture may be perfumed by the substitution of Cologne or Lavender Water for the Alcohol, or by the addition of some aromatic

essential oil, in small quantity. Shaving the hair in front, as is practiced by some females, to increase the apparent height of the forehead, is one of the most absurd of all the attempts made by weak man to improve the beauty which God has given him, or to conceal his defects. Except in the case of persons with very light hair, it can never deceive any one ; and when the blueish stumps show, as they will in spite of the most careful shaving, nothing can be more disgusting. The real height of the forehead is not increased of course, and a troublesome inconvenient process is completely thrown away, without the least compensating advantage. As to false hair, hair dye, &c., they are too delicate a subject for a work of this kind, and their use must be left to the judgement and choice of every one for himself.

I cannot refrain here from a few remarks on what I consider the absurd and pernicious custom of shaving all or a portion of the face. That the beard was given to man for useful purposes, there can be no doubt. There is evidence, not to be gainsayed, that those who wear their beards, are much less liable to colds, tooth-ache and neuralgia of the face, and also to the graver acute and chronic affections of the lungs, than those who shave. That a fine full beard is the most dignified and majestic ornament to the head of man, no one, with any perception of natural beauty, can deny—just think of a Patriarch or Prophet with a smooth shaved smug countenance ! That a change of opinion in favor of beards is going on extensively, is evident, and I trust the time is not far distant when the razor will be unknown out of Penitentiaries.

THE NAILS.

Trivial and unimportant as the care and management of the nails may appear to many, yet I assure my readers that well shaped and well tended nails are not only conducive to beauty, but to comfort and health. The extremities, i. e., the hands and feet, are most liberally supplied with nerves, and appear to have a very intimate and close sympathy with the vital functions. It is not necessary to go at length into the physiological explanation of this ; an example or two will serve to explain my meaning.

A trifling bruise of a finger or toe will much more frequently produce faintness and sickness of the stomach than will a broken leg or arm, or a severe wound on the trunk. Again, a tight or uncomfortable boot or shoe will speedily produce excessive fatigue in walking, much more so than a more serious ailment of some other part of the frame. A distorted nail is often the cause of severe fever, and a surgical operation of no trifling severity is frequently necessary to relieve the difficulty. In view of these facts, the care of the nails assumes an aspect of importance. There are habits, into which many fall, which are destructive to all beauty and symmetry of the nails. Among these, the most pernicious is that of biting them down to the flesh ; by this abominable practice, the ends of the fingers are rendered bulbous and clumsy, the nail separates more and more from the flesh and grows narrower and narrower, until a mere strip, of an eighth of an inch wide, is, in many instances, left. Few sights are more disgusting than the fingers of a nail-biter of long standing. Nor is its unsightliness the only bad consequence resulting from this nasty habit ; the ends of the fingers are kept in a state of constant inflammation, they are tender and unfit for strong grasping of any substance, and the sense of touch is seriously impaired, so as considerably to interfere with manipulations which require the exercise of any delicacy of that sense. The unfortunate slaves of this habit are seldom as much to blame for it as their parents ; the practice is contracted in childhood, and often overlooked, or regarded as a matter of little or no consequence, until it is firmly fixed, and the nails have become irremediably deformed, before adult reason can step in as a corrective. Parents should check its first appearance, and with severity, if necessary.

Another practice very injurious to the nails, although incomparably less so than biting them, is that of digging under the nail with some sharp steel or iron instrument for the purpose of removing dirt which may have lodged there. By the habitual use of a sharp instrument to clean the nails, they are separated from the flesh, and the oval shape, which is considered so handsome, is destroyed. If anything more than the nail brush should be occasionally necessary for cleaning the nails, the cor-

ner of a peice of card, or of a piece of folded paper, is quite sufficient. Scraping the outside of the nails makes them thick and clumsy. Cutting away the little fold of skin at the base of the nail, or rubbing it in washing so as to separate it from the nail is productive of injury to its appearance, and often causes soreness. The best way to keep the nails healthy and handsome is to cut them carefully at stated periods with a sharp pen-knife, so that the end will project about an eighth of inch beyond the junction of the nail and flesh, and never to let them grow much longer than that ; and to use nothing for cleaning them but a nail brush and soap and water. In this connection, I may mention, with propriety, an affection to which many are subject in cold weather, and which often causes severe suffering. I mean chopped hands. Those whose hands are frequently in warm water are more peculiarly liable to this affection. Luckily, it is all cases very easily removed. All that is necessary is to anoint the hands, for three or four nights in succession, with salad oil, and sleep in a pair of old gloves. The worst case will yield completely to this treatment in a week, or less. In many persons there is a tendency in the nails of the great toes to become curved in a lateral direction, so that the edge, or edges press on the flesh and cause soreness, or even ulceration, and in some instances the nail has completely cut through the toe. This tendency may be always checked in the early stages by judicious treatment. The nail should be suffered to grow long, and frequently soaked in warm water until it is softened, raw cotton should then be inserted under the corners so as to raise them and diminish the lateral curvature, the cotton should be removed and replaced by a fresh quantity every day. Where the nail is very thick, it may be necessary to render it more flexible by scraping it after it is softened by soaking in warm water. In aggravated cases, the aid of the surgeon should always be invoked.

WARTS, CORNS, AND BUNIONS.

Warts are hard and generally insensible excrescences growing from the skin ; they sometimes become very sore, and are then, beside their unsightliness, a source of considerable pain. Chil-

dren are more subject to them than adults, and they evidently flourish best where cleanliness is neglected. They are frequently very obstinate, and remain for months, and even years, in spite of all treatment, and then suddenly disappear without any apparent cause. Innumerable substances have been used for their eradication, many of which will succeed, in some instances, and again fail under apparently similar circumstances. Caustics, and the mineral acids, when persevered in daily for a considerable time will often remove them. When they are very large, and on a part of the hand which renders them liable to frequent knocks and bruises, they may be removed with advantage by the knife. They sometimes occur between the toes, where they are kept soft by the mositure of the foot, and are commonly called soft corns ; they are generally very sore and troublesome, and ought to be removed by caustic or the knife as soon as possible. Muriatic Acid, applied daily (by means of the glass stopper of the vial containing it) to the top of the wart will generally remove it in fourteen or fifteen days ; and the pain and soreness are by no means as great as those produced by the stronger mineral acids—Oil of Vitroil and Aqua Fortis.

Corns are hard substances partially embedded in the flesh of the toes, and consist of an accumulation of innumerable scales of the cuticle or outer skin. They are principally caused by the rubbing and pressure of the shoe or boot, although some persons seem to have, naturally, a greater tendency to them than others. The cuticle, or scarf skin, consists of very minute scales which are insensible and without blood-vessels or nerves ; these scales are, under ordinary circumstances, slowly cast off and renewed, and it is in this way stains of caustic and other substances gradually disappear from the hands. Now, when the toes are subject to the continual pressure and rubbing of the boot or shoe, the scales are formed more rapidly, and, being compressed, accumulate and become what are called corns, probably from a sort of resemblance to a kernel of wheat, or some other grain. The best preventive of corns is to wear loose shoes, but such is the tendency in some persons to their formation, that even this precaution will not always

entirely prevent them, although it will always alleviate them. In most cases the pain and inflammation appear to be produced by the pressure of the central hard portion of the corn (commonly called the core) on the soft parts beneath. When this core is got rid of, there is generally an interval of ease for some days, or even weeks. Now, the true principle of cure is to prevent the accumulation or reformation of this core. But first to extract it when once formed. This is often attempted by the use of the knife, and in this way it may be partially accomplished; but the best way is to soak the corn for a long time in tepid water, by which means the core will swell, divide into layers and project above the general surface; when in this condition, it may be easily peeled out by the nail or a blunt steel instrument. This process will often require an hour or two, but when it is once done, the victory is gained, and a future accumulation may be easily prevented by a little care. The necessary soaking has another advantage in relieving the inflammation caused by the pressure of the core. After the core is extracted, it will be well to apply a small plaister of Diachylon, spread on kid leather, for a few days; this will do away with any remains of inflammation. To prevent the reaccumulation of the core, frequent soaking and scraping with a knife or pumice stone are the most effectual means; Diachylon plaister may be applied when there is much soreness. By these means faithfully persevered in, together with the wearing of loose shoes, corns may be almost always cured and rendered bearable. The moderate application of Nitrate of Silver or Lunar caustic will sometimes prove a valuable auxiliary in relieving the pain and hastening the separation of the core; it should be applied a day or two before the soaking. No one need suffer long from corns who takes good care of his feet, and is not too lazy to follow the above directions, faithfully.

Bunions are a much more serious affection than corns. They consist in an enlargement of the second joint (that is the second from the end) of the great toe, generally, though they may exist on the other toes. The seat of Bunions is differently described by different authors, some describing them as a mere accumulation of thickened cuticle on the inside of the

joint of the great toe, others as an enlargment of the mucous bag on the inner and underside of the joint, while others speak of them as an inflammation of the joint itself. The truth seems to be that all three of these affections exist, and have been denominated Bunion, although very different in their location and severity. The first, that is, the thickening of the skin on the inside of the joint is a trifling affair, and may be treated precisely according to the directions given above for the treatment of corns. The other two affections are much more serious, and often cause great suffering, and will, if neglected, produce permanent distortion of the toe.

As I have observed of corns, tight and ill-made boots and shoes are the most frequent source of Bunions, but still, some individuals and families are much more subject to them than others. Rheumatism and gout often seem to be the cause of Bunions. As in the case of corns, prevention is better than cure. The absurd custom of making shoes and boots much narrower across the toes than across the ball of the foot is a source of incalculable suffering to those calling themselves civilized and refined. Examine the foot of an infant, and you will find that the widest part of the foot is in a line drawn from the joint of the little toe to the second joint of the great toe. Now, the foot of an adult, unless distorted by bad treatment, will afford the same comparative measurements ; how, then, can a shoe, narrow at the toe, fail to injure the foot. When a tendency to the formation of Bunion and distortion of the great toe is first observed, a large and loose shoe, very wide at the toe, should be put on, and, if there is much inflammation of the joint, it should be combated by leeches and cooling applications. When the inflammation is of a slow or chronic character, an ointment of Veratrine, prepared according to the following formula, will be found very useful—

Veratrine, eight grains.
Lard, one ounce.
Mix thoroughly.

This ointment may be rubbed on the joint morning and evening. In some cases the application of a blister, or of solid Lunar Caustic sufficient to produce a blister, and followed by

a poultice, has been found effectual in checking the inflammation. But I repeat that the use of properly made shoes or boots, while the foot is growing, will do more to prevent Corns, Bunions, and all the distortions so common in our days, than all remedies and medical treatment together. It is really wonderful that reasonable people will consent to suffer torture in the false worship of the Juggernaut, Fashion.

CHAPTER II.

Exercise—Sleeping—Ventilation and Warming of Houses, &c., &c.

Exercise has been in all times, and by all physicians, considered an indispensible condition of health. The farmer, the mechanic engaged in active work, and the day laborer, of course, do not suffer from want of sufficient exercise; but the merchant, the shop-keeper, the literary and professional man, and the inmates of manufactories, where the air is confined, and the employment sedentary, all need fresh air and exercise, at least once in the twenty-four hours. The fatigue of a day spent in the study, the counting house, or the close manufactory, is almost always, if the weather be good, sooner relieved by a walk in the open air, especially outside of a city, than by absolute rest; this, of course, must come after. Of all kinds of active exercise, walking is undoubtedly the best, for the greatest number. Some robust people may derive benefit from the more severe exercises of the Gymnasium; but brisk walking, in the open air, will generally suit the man of sedentary pursuits, better than other species of exercise, and, if the gait of the horse be easy, can sometimes be borne by those who cannot take much walking exercise. In a previous portion of the work, I have expressed an opinion adverse to the taking of much exercise before breakfast. The best time for taking exercise is, for the man of sedentary pursuits, in the edge of the evening, immediately after tea. Under the head of passive exercise, are included riding in easy carriages, the use of the elastic plank, the swing, &c. This kind of exercise is peculiarly fitted for convalescents, and habitual invalids. This

seems a proper place to speak of manual labor schools, which have, of late years, attracted so much attention. That they have all failed, is no more than might have been foreseen, by any one intimately acquainted with the physiology of man. While a reasonable amount of exercise will, by keeping the body in health, increase the capacity for mental exertion, severe bodily and mental labor appear to be, in most cases, incompatible. The instances of men engaged in daily mechanical labor arriving at a high degree of mental cultivation, are only exceptions to the rule, and even in these examples the mechanical occupation has seldom been continued after a certain degree of advancement in mental culture has been attained. The profession which combines the greatest amount of physical and mental exertion in its duties, (namely, the medical profession,) is shown, by statistics, to afford the shortest span of life to its members. Some men, of remarkably strong frame, may join considerable bodily labor with high mental cultivation, but most men will find the combination of hard bodily exertion and much study too wearing on the energies to be long continued. The health and beauty of my fair countrywomen would be very much benefited by much more walking and riding, than they are in the habit of practicing. Our dry and sunny climate affords ample opportunity for every one to exercise frequently in the open air, and yet, strange to say, such exercise is much less practiced than in the cloudy and humid climate of Great Britain. Every one, not absolutely an invalid, to should make it a rule, to breathe the fresh air at least once a day, no matter what may be the weather, short of an actual storm.

To be Continued.

ARTICLE III.—Unsuccessful Operation for Ununited Fracture. By Prof. Moses Gunn, M. D.

In reporting the history of the following case, I shall be acquitted of the charge so frequently brought against surgeons, of making public only their successful experience; for in all my surgical records, I could not find an example surpassing it

in want of final success, or its parallel, for accident during the operation. But occurring as it did, in the course of a public clinic, the case belongs to the profession, and in withholding the record, I should violate my ideas of justice as regards the relation which I sustain to my professional brethren ; it presents, too, points of real interest, and I therefore select it from others, which might, perhaps, create more capital for myself

The patient, J. G., age 24 years, was a man of fine physical development, and general appearance of health. Six weeks previously to Oct. 10, 1856, he had sustained an oblique fracture of the humerus at its middle, the obliquity extending from behind and below, upwards and forwards. The arm was shortened about an inch and a half, the upper end of the lower fragment protruding under the skin at the outer border of the biceps muscle. In this position union had occurred, by a material, which, though it prevented restoration of the fragments to their original position, and the arm to its proper length, admitted freedom of motion in every direction.

Treatment.—I adopted Professor Brainard's method and pierced the extremeties of the fragments and intervening tissue repeatedly, making but one puncture through the integment. The arm was then dressed with the roller and four splints. In addition, a firm body compress was placed between the arm and body, and a broad roller passed over all, including arm and body. The fore-arm was supported in a sling, and thus securely dressed, the result was awaited.

Oct. 28.—As yet no appearance of increased action in the parts—operation repeated and arm redressed.

Nov. 4.—There being still no signs of reparative effort, a seton was introduced between the fragments, and the arm dressed as before.

Nov. 17—Still no increase of action at seat of injury. All dressings were now removed, and the seton being still retained, the arm was left to swing for three or four days, when the dressings were reapplied.

Nov. 20—All means having thus far failed to excite the desired action, I resolved on exsection of the intervening tissue and the extremity of each fragment, so as to bring the fresh

bone surfaces together. The seat of the fracture was identical with the spiral portion of the musculo-spiral nerve, and as its normal relations were necessarily altered by the mal-position of the lower fragment, I endeavored to modify the operation so as to avoid its injury. An incision was accordingly made, commencing at a point just anterior to the insertion of the deltoid, and extending downwards along the outer border of the biceps, with a slight inclination outwards. The bone was reached and its section commenced with a saw and completed with bone forceps. No vessels requiring ligature, the wound was closed with the requisite sutures and dressed, and I congratulated myself on the completion of the operation without division of the nerve. But a paralysis, complete in the carpal, and partial in the digital extensors, showed too plainly that the nerve had sustained injury, undoubtedly by the bone forceps in completing the section of the upper fragment. The arm was firmly secured in softened binder's board, the edges of which approached, but did not cover the wound, and the body dressings were applied.

Nov. 28.—Removed sutures—union by first intention except at a small point in the centre of the incision. The wound healed from this time rapidly, and soon converted the case into simple fracture. Patient's health continued good, and I confidently expected a firm union.

Jan. 9, 1857.—Fifty days after the operation, the dressings were all removed, and not only no union had taken place, but there appeared not the slightest effort at repair.

Detroit, Jan. 12, 1857.

ARTICLE IV.—The University Medical College.—A. B. P.—F. Campbell Stuart, et alii.

Messrs. Editors:—The American Medical Gazette, for January, republishes, from one of your cotemporaries, an article signed "A. B. P.," wherein occurs one of the most unblushing instances of those too frequent attempts to deck with stolen plumage, the object of a fulsome adulation

It appears that one F. Campbell Stewart, of New York, a

doctor, now upon his travels in Europe, read a paper before an Edinburgh society, enlightening the "cannie Scots" upon medical matters this side of the water. He was unfortunate enough, it seems, to fail in informing Europe and the world, that in the city of Ann Arbor, hard upon the Central Railroad, Michigan, U. S., "sucking saw-bones" can be furnished with Æsculapian nutriment without money and without price.

Perhaps Dr. Stewart thought the diet too meagre to render the case an exception. At all events, the building and occupants in the rear end of University Square, Ann Arbor aforesaid, were *not* noticed. *Hinc illae lachrymæ.*

Perhaps, Dr. Stewart thought that a shadow of clinical teaching, at least, was requisite to character as a medical school.

Perhaps, Dr. Stewart thought that a free school that could show no increase in the number of its students, even with an argmentation of its faculty, and more than quadrupled contingent expenditures, year after year, lacked something which kindly feeling towards those connected with the institution, with whom, we are informed, "he is personally accquainted," induced him to shield from too close scrutiny by any shrewd Scotchman or Yankee, of an investigating turn of mind, who might chance to hear or read his disclosures.

Perhaps, Dr. Stewart is a personal friend of the President of the National Medical Association, and knows that that dignitary lives and moves, and has his professional being in the reputation of being the inventive creator of the Ann Arbor school and its peculiarities—and so knowing, did not wish to deprive him of that honor by eliciting the facts in the case.

Unfortunately for the object of "saponaceous sacrifice," A. B. P., in reprehending Dr. Stewart for his sins of omission, falls into one of commission most grievously himself.

A. B. P. says of the Medical Department of the University of Michigan,—"Its peculiarities have more than once been discussed in the American Medical Assocation, at meetings where Dr. Stewart took an active part; *and the gentleman who has the honor of devising the plan of that school, and who is most intimately associated with it, is now President of that*

body; and Dr. Stewart had a document in his pocket, when delivering that address, signed by that President, accrediting him as a member of the American Association, and a representative of the profession in this country to medical societies and the medical profession abroad.

Most assuredly Dr. Stewart did "know the President, and had heard of *one* of his protegees." But allow him to fight his own battles.

The President of the American Medical Association, and formerly Chairman of its Committee on Education, is in no degree responsible for any existing peculiarity of the Ann Arbor school of medicine, excepting, perhaps, the presence of two or three of its faculty. His own plan had nothing in common with the present plan of that institution.

However ably he may have presented its excellencies in his elaborate report as Chairman of the Committee of Education, the ideas there advanced were utterly at variance with those he entertained at the time of the adoption of the plan he now so strenuously insists upon.

I know whereof I speak, and challenge contradiction from those who were present.

Dr. Pitcher was not even present at any of the meetings of the faculty who adopted the plan. There is not a line, letter, syllable or character of the scheme, as adopted, for which he is in any degree responsible, except for subsequent approval, as one of the Board of Regents.

The Medical College building was erected by the pleasant stratagem of terming it a Laboratory. The lengthened term was only a device to secure the medical faculty from the unpleasant predicament of being paid only a *pro rata* salary, which would have reduced the pay at least one-half, and incidentally to enable five lecturers to perform the work of seven.

The undersigned was Chairman of the Committee on the scheme for instruction, and as such, knows who did draught that plan, which has since received scarcely as much as a verbal alteration. The subject of clinical teaching was the most difficult to get on smoothly with. The difficulty was met by the bold assumption that clinical instruction was the appropriate

business of the private preceptor, and could not be profitably engaged in by public lecturers, or even in hospitals, with a large number of students in waiting. The writer hereof still entertains the view he then advanced, but well recollects that the "President of the American Medical Association" proposed, and the Professor of Theory and Practice seconded the establishment at Ann Arbor of the "Michigan State Hospital" by aid to be solicited from the Legislature. Thither were to come the lame, the halt and the blind, and over their infirmities the wisdom of the faculty was to breathe healing virtues in the very eyes of thronging students. Where is the evidence that that dignitary, whose position Dr. Stewart was wickedly oblivious of, ever changed his opinion till after the complete "devising of the plan of that school? The *suaviter in modo* was never more delightfully displayed than when my urbane friend waived ALL his own plans, even to the "Michigan State Hospital," and with the most dignified resignation, condescended to stand godfather to another's professional progeny. It is *such* a promising child, and bids *so* fair to reflect honor upon the declining years of the Emeritus Professor!

It may be that A. B. P. claims for his senior the honor of "devising the plan of that school," from his having something to do with its being made a *free* school. This was no work of his. The organic law forbade the charge of any fee of admission to the University of more than ten dollars. Many of the Regents [illegible] account alone.

Will A. B. P. claim that clause in the State statutes as the work of his senior? We pause for a reply.

This article has already extended beyond the limits designed, and I close abruptly. It is an unwelcome task to intrude one's self upon the public notice, but sometimes there comes a point beyond which forbearance ceases to be a virtue. Identified with the organization and palmiest days of the Medical Department of the University, and having devoted my best energies for over four years to the work of establishing for it a name and position among the best institutions of the country, submitting then in silence to its arbitrary treatment, I will not

see unmerited honors piled upon the head of this dignitary at the expense, not to say of myself, but at least of the active, working members of the Faculty. *Suum cuique tribuendum.*

J. ADAMS ALLEN.

Kalamazoo, Jan. 1857.

ARTICLE V.—Case of Foreign Body in the Lungs, for about Six Years. By A. R. TERRY, M. D.

In the summer of 1837, I was consulted by R. R., a young man of about seventeen. He had a constant cough, with moderate mucous expectoration, aggravated by the changeable weather of spring and autumn. The history of the case was as follows: When he was past twelve, in the autumn of 1832, he was biting copper percussion caps, so as to close the open end for the purpose of throwing them into the fire to have them explode. While biting one, it slipped from between his teeth and went down his throat. A slight choking and sense of suffocation ensued, and two or three physicians were called, who, it appears, differed in opinion as to whether the cap had entered the larynx or esophagus, so little inconvenience was experienced. In a few days a slight cough came on, and in two or three months, a moderate hemoptysis occurred. The hemoptysis recurred [illegible] was he so sick as to be unable to attend to his business (that of a clerk in a store) for more than a few days at a time. He said his growth had been checked in consequence, but I consider this problematical.

The preceding are all the facts which I could learn about the previous history of the case.

Physical examination showed extensive mucous *rale* in both lungs—and considerable condensation about two inches below the clavicle in the left lung. There was no evidence of a cavity in either lung, and if one existed it must have been very small. The pulse was generally at a healthy standard. Sometimes, when the weather was changeable, the cough would become troublesome, and there would be a little fever. There

was some dyspnœa when he exercised briskly. This autumn, he had a slight hemoptysis, and another in the spring of 1838. These two attacks had been very easily combated by the usual means; but during the summer his cough was more troublesome than it had ever been before.

In October, 1838, I was in my office just at dusk, when R. R. rushed in, the blood gushing from his mouth almost in a continuous stream. I have never seen so copious an hemoptysis. As soon as it subsided so that he was able to speak, he told me that he had brought up the percussion cap, and that if I would examine a pool of blood on the sidewalk, opposite a certain window of the store below, he was sure I would find it. After making him comfortable, and making arrangements for conveying him to his lodgings, I took a lanthorn, and in the very spot he had indicated I found the cap, with the sides of the open end compressed almost together, and strange to say with no apparent oxydation.

After the hemmorrhage was sufficiently controlled, auscultation showed a cavity of considerable extent in the situation of the condensation before spoken of. The cough became very urgent, and the hemmorrhage recurred twice or three times in 24 hours for more than a week ; but it was never as profuse as at first. He became excessively reduced and exhibited all the symptoms of excessive anhemia. After the final cessation of the hemoptysis, a most profuse expectoration of a grayish mucopurulent matter came on, sometimes amounting to more than sixteen ounces a day. This gradually diminished until, in a little over six weeks, it amounted to no more than a few teaspoonfuls in a day—the cough was nearly gone. At this period of the case no cavity could be found, and before spring the patient was able to resume his usual avocations.

In May 1839, he had a slight hemoptysis, and another in November; but this, as far as I know, was the end of it. I kept sight of the patient until 1843, and nothing abnormal could be discovered about the lungs, except a slight condensation about the site of the cavity, in the left lung. His health was perfectly good, and the dyspnœe, before spoken of, was entirely gone.

The above case, as a contribution to the history of diseases of

the lungs, is in my opinion principally valuable as showing what intense and long-continued irritation and what a large amount of lesion can be endured in this viscus without fatal results, when there is no tendency to tuberculosis.

The treatment of the case has purposely not been detailed, It showed nothing peculiar ; my efforts were confined to the checking of the hemmorrhage, to equalizing the circulation, and removing irritability by perfect quiet, and the moderate use of anodynes.

Detroit, Jan. 1857.

On the Development Vegetations on the Genital Organs of Fen ales during Pregnancy.

Dr. Thieberge, of Paris, in an article pubtished in the *Archives Generales de Medecine*, for May, 1856, describes certain vegetations and tumors appearing on the genital organs during pregnancy, as an occurrence entirely independent of syphilis, and merely resulting from the effects produced by the condition of utero-gestation. The immediate cause of these appearances he considers to consist in, either the congestion existing in the vaginal mucous membrane duriug this state, or the irritation occasioned by the discharges so frequently present—more especially taken in connection with the congestion of the parts. After quoting several authorities, and the facts observed in a few cases, as supporting his opinion, he concludes by stating that such vegetations are nothing more or less than the effects of pregnancy ; that they are frequently difficult to cure while this condition lasts ; and they ought to be treated, not by general, but merely by local measures.—*Edinburg Medical Journal.*

Dr. Kane's Health.

We make the following extract, says the *Transcript* of the 5th inst., from a letter to a mercantile house in this city, from it Havana correspondent, under date of December 29. The writer says :

"Dr. Kane, the Arctic explorer, arrived here from England on Christmas day, but very low from the effects of a stroke of paralysis on the passage out. He seems a little better since landing, but his physicians think it is very doubtful if he ever leaves here."—*Boston Med. & Surg. Journal.*

SPIRIT OF THE MEDICAL PRESS.

Ovarian Tumor weighing One Hundred and Six Pounds. Great Elongation of the Cervix Uteri and Vagina.

A. H., a single woman, aged 31, whose general health had been good, has had an ovarian tumor seven years, especially appreciable four years ago, It did not engage much of her attention till within the last two years, when, gradually increasing in size, it became so inconvenient that she sought for relief in the Hospital for Women in Soho Square, then in St. Mary's Hospital, and finally became a patient at the St. Pancras Royal Dispensary, under the care of my colleague, Dr. Smiles. She attributed the origin of the tumor to a strain when lifting a heavy weight, seven years ago. Latterly its dimensions were enormous, being accompanied with general anasarca during the last five months. Notwithstanding its inconvenient bulk and an œdematous condition of the limbs, she continued moving about to within a fortnight of her death, when she became bedridden and utterly helpless, and died on the 28th of November.

Autopsy twenty-seven hours after death.—The entire body much swelled from infiltration of serum, with the exception of the arms and face, which were emaciated. The body lay on its left side, the weight and size of the

piece.

On turning the body over on its back, and supporting the abdominal tumor, it presented a remarkable appearance from its very great prominence; it uniformly projected from the entire abdominal cavity, but produced at the same time, deformity of the thorax, the lower and anterior part of which was tilted forwards. The measurement of the tumor externally, from the ensiform cartilage to the pubes, was thirty-five inches and a half; and the girth of the body and tumor together round the loins, fifty-four inches. A slough was present over the left trochanter, the decubitus being confined to that side during life.

The abdominal walls were much infiltrated with serum, which oozed out on cutting through them to reach the mesian line of the tumor. The tumor was adherent to the peritoneum in various parts laterally and anteriorly. These adhesions could be broken down with tolerable facility, however, as they partook of the character of condensed areolar tissue. They were

more persistent anteriorly, requiring careful dissection to detach the tumor at this part; posteriorly and inferiorly strong bands of cellular tissue had to be cut through to isolate the mass. At the margins of the pelvis these were very thick and strong, and acted as supports; but on division the tumor became free. All the viscera were displaced upwards, the stomach and greater part of the bowels occupying a portion of the left side of the thorax; the liver was dislocated towards the left side, and occupied a central position beneath the heart; it was very small in size, of a dark green color externally extending but a couple of lines into its substance, which was apparently quite healthy. On chemical examination, I found it to contain no sugar. The gall bladder was very much distended, partly with gas, partly with bile. The stomach, from long compression, was somewhat contracted in size, and constricted at its middle portion, giving it a bilobular form. The intestines were natural as far as the descending colon and rectum, which were diminished in calibre into a tube about three-quarters of an inch in diameter. The sigmoid flexure was obliterated; but the rectum pursued its usual course, and passed under the base of the tumor, a portion of which nearly filled the pelvis. The cæcum was adherent superiorly to the apex of the tumor, apparently from old inflammation. The kidneys were quite loose, the left more so than the right. Both ureters were slightly embedded in the substance of the tumor on either side laterally, and much dilated and filled with urine, as was seen in the specimen, the right kidney being at the same time allowed to remain attached to it. The spleen was enlarged to double its size, and quite healthy. The bladder is seen at the lower part of the tumor anteriorly, but flattened upon it, and contains several ounces of urine.

The left side of the chest held about two pints of serum. The lung here was completely collapsed, did not crepitate in the slightest degree, and was in a state of carnification, resembling the spleen in color. It had not performed its function, most probably, for some months preceding death. The

was healthy in structure, its posterior and left aspects engorged from hypostatic congestion; and at its apex it was slightly affected with interlobular emphysema. The heart was very small indeed, but normal in every respect, excepting a fatty degeneration of its tissues. It was situated beneath the upper bone of the sternum, and encroached on the right side.

The outlet of the thorax was very much expanded to meet the pressure of this enormous tumor; and the crests of both ilii were expanded outwards to assist in its support, measuring from one anterior superior spinous process to the other, eleven inches and a half.

The tumor was finally removed by placing a ligature around its pedicle, which included the rectum, vagina, and urethra, all of which were shown in the specimen. The tumor itself weighs one hundred and six pounds, and appears to have involved the left ovary, as the right ovary, much flattened and its Fallopian tube may be distinctly seen on its left aspect, the enlarged left ovary having passed behind and to the right of the uterus, which lies

completely on the anterior part of the tumor towards its left side, having been dragged into this position by means of its ligament, which has become incorporated into the tumor. Its cervix is considerably elongated, to the extent of several inches, as is also the vagina; and its left Fallopian tube is stretched out and spread over a large portion of the left side of the tumor. The enlarged left ovary consists apparently of two tumors firmly joined together, containing fluid, a description of its contents and dissection being deferred until after its exhibition in its natural state before the Society.

This tumor is most probably the largest ever removed entire from the dead body. Larger tumors have undoubtedly existed, and as many as one hundred and twenty, and even one hundred and forty pounds of liquid are recorded to have been withdrawn from one sac. My friend, Mr. Baker Brown states, in his work on "Diseases of Women," that he has withdrawn ninety-three pints of fluid at one tapping. This is equivalent by weight to a hundred and sixteen pounds.

As might be expected from the enlargement of the tumor, the greater part of the abdominal viscera, together with the diaphragm, were pushed into the thorax; the left side especially, as pleuritic adhesions in the right prevented it in that side—and the left lung completely lost its function. From the interference thus caused to the performance of the most ordinary functions of life, universal emaciation was produced, which eventually ended in dissolution.

December 4, 1855.

Report on this Specimen by Dr. Hare.—The large tumor consists, as regards its bulk, almost entirely of a diseased mass originating in the left ovary. In its general outline it is nearly circular, but a small portion of it at the lower part having been situated in the pelvis, and this portion being much smaller than the mass above, the whole may be said to have a slightly pyri-form appearance.

An idea of the enormous size of the tumor may be obtained from the fact of its weight being one hundred and six pounds, and from the following being its measurement:

Circumference, vertically, over side and top,	68 inches.
Do. do. do. not including the pelvic portion,	63 "
Do. vertically, over anterior and posterior surfaces,	55 "
Diameter, vertically,	22½ "
Do. transversely,	20 "
Do. antero-posteriorly,	10½ "

The whole tumor is one cohtinuous mass; but as viewed *anteriorly*, it is divided into two portions, of nearly equal size, by a distinct sulcus running vertically at its upper two thirds, and then inclining outwards and to the right, to the point where the abdominal and pelvic parts of the tumor unite.

These portions may be termed right and left. The right portion is very firm and resisting ; its surface is somewhat uneven from various slight elevations, none of which are larger in diameter than a walnut, and none of which project more than very slightly (the one-sixteenth to one-eighth of an inch) above the general level. Its color varies much in different parts, some patches being red or purplish, others of a yellowish grey. Many large vessels ramify over its surface. The left portion is longer vertically than the right one, as it includes the pelvic part of the tumor. Fluctuation is distinctly felt at every part of it, but its parietes can be felt much thicker superiorly than inferiorly ; and they are thinnest of all at the pelvic part ; its surface is almost perfectly smooth, is of a more uniform light color than the right portion, and is much less vascular than it.

On examining the posterior surface of the tumor, the same general division into a right or solid, and left or fluctuating portion is observable ; but the solid portion is less transversely in proportion to the fluctuating portion, than it is anteriorly ; and it is now found that the left or fluctuating section is a huge cyst, which originates, as it were, from the side and posterior part of the right or soiled part. The solid mass is singularly reflected from the anterior part over the top of the tumor, thus forming a kind of cap for the top of the large cyst ; and this cap is so continued downwards behind the upper part of the cyst, as to form a flap of a triangular shape, the dependent portion of which can readily be dissected off, so as to leave it only attached by its base at the very top of the cyst. The triangular flap measures at its base and each of its sides just, eight inches; at its base, where it covers the top of the cyst, it is one inch and a half in thickness ; at its dependent point, only one-quarter of an inch thick. The whole of the posterior surface of the tumor is more congested than the anterior, but here (as was the case anteriorly) the solid portion of the mass is somewhat more uneven on its surfrce than is the cyst portion.

The large cyst, consisting of what has been termed the left portion of the tumor, and the whole of the pelvic part, is found to contain a nearly homogeneous puriform fluid, containing, however, a few small flaky masses. The quantity amounted to forty-four pints.

Besides this large cyst, only three or four other small ones are found embedded in the solid part of the tumor. The largest of these contain about two drachms of a yellowish-red serious looking fluid. None of them appear to be proliferous.

The pelvic part of the tumor (the walls of which were thinner than those of any other part of the cyst) appears to have almost completely filled the cavity in which it was situated. The rectum is found to be pushed very much to the left of its natural position ; it is united by moderately firm adhesions to the ovarian tumor. The bladder is more firmly adherent, but is situated considerably to the right of the median line.

The most singular alterations, however, both in form and position, are

those which have occurred to the organs of generation, all of which are very firmly adherent to the tumor. The vagina is considerably elongated, and measures six inches and a half in length. It inclines very much towards the left side, and at its extremity no cervix uteri is perceptible, but only a small aperture, which is found to lead into the cavity of the uterus. The organ is, like the vagina, firmly adherent to the anterior surface of the tumor, and, like it, is exceedingly elongated, so that it measures seven inches and a half in length. The elongation is almost entirely due to the stretching of the cervix. Owing to this elongation and its inclination towards the left, its fundus is placed not far from the left border of the tumor, at somewhat more than one-third of the distance from its base. The fundus uteri itself presents a very remarkable appearance; its right half or cornu is a small oval-shaped prominent mass on the surface of the large tumor, and not at all unlike an enlarged ovary. Its left half is thinned, flattened, and elongated, and so much incorporated with the substance of the tumor as not to be, at first sight recognised. From the extremity of this half of the uterus comes off the left Fallopian tube, enormously elongated, and expanded over a large extent of the tumor, which itself is, as already stated, the left ovary in diseased condition. This left Fallopian tube measures twelve inches in length. The right Fallopian tube appears, owing to the elongation of this organ, to arise from the middle of the right side of the uterus. The right ovary is much flattened, so as to be only one-eighth of an inch in thickness, though in other dissections it measures two inches and a half by one inch and three quarters.

The tumor (after the cyst has been emptied of its contents) when laid flat on the table, has a thickness, at its thickest part, of four inches and a quarter.

On microscopical examination of the substance of the tumor, the difference in the color of its different parts is found to be almost exclusively due to differences in vascularity. Some of the paler portions contain comparatively few blood-vessels, while in some of the reddest parts the vascularity is extreme. The substance itself is composed of fibro-cellular tissue, with here and there minute cysts invisible to the naked eye, and formed, apparently, by the separation of fibers from each other.

Subsequently to exhibiting the specimen to the society, Dr. Gibb made a careful examination of the fluids, of which the following is the account:

Pus.—The large cyst containea forty-four pints of yellowish-green watery pus, with a slightly fœtid odor; it was alkaline; specific gravity, 1018; it contained sugar and albumen, the latter to the amount of 10 per cent. Under the microscope were seen broken up pus-corpuscles, granular matter, scales, and patches of epithelial membrane, compound granular corpurcles, and fat globules and crystals. The weight of the forty-four pints is fifty-five pounds, thus leaving the weight of the solid parts of the tumor to be fifty-one pounds.

Serum.—The amount did not exceed a couple of drachms, of a clear reddish color, from slight admixture with blood, taken from the small cyst. It was alkaline; heat and nitric acid threw down albumen. No sugar present. The microscope showed blood and fat-globules, transparent granular matter, with occasional long slender plates of cholesterine.

Urine.—The bladder contained several ounces of a muddy, opaque, fawnish-brown urine, slightly fœdtid, neutral, specific gravity 1028. On standing some hours it became a clear dark yellow, and a heavy fawnish pink deposit subsided, which was partly soluble by heat. Heat and nitric acid both threw down a slight deposit of ablbumen, and partly dissolved the pinkish deposit. A mere trace of sugar was detected.

The microscope showed myriads of spherical bodies of urate of ammonia, formed from long standing of the urine in the bladder; occasional crystals of urate of soda, and large numbers of lozenge-shaped crystals of uric acid, in clusters and free, together with a few broken up mucous globules, and monads in abundance. The spherical bodies of urate of ammonia, when examined by reflected light, with a power of forty diameters, presented a light fawn color. They were dark, but not black, by transmitted light. They were unaffected by heat or liquor ammoniæ; acetic acid dissolved a large proportion of them, and converted others from a round to a square form, taking the place of the uric acid, which, on becoming free, formed characteristic crystal. Boiling alcohol dissolved one-half the bulk, and a portion was soluble in liquor sodæ. The lozenge shaped crystals of uric acid were completely dissolved by heat and liquor sodæ, and partly so by hydrochloric acid. The entire deposit was soluble in liquor potassæ.

GEORGE D. GIBB, M. D., A. M., F. G. S.

December 15, 1856.

Abscess of the Iliac Region in Males.

Dr. Condie had, within the past few months, witnessed four cases of abscess, which, in many of their features, were new to him.

"In their general symptoms these cases were closely analogous to one another. All of them occurred in males, beteen the ages of eighteen and forty; persons surrounded by the comforts of life, and good livers. Two of the patients were slender in person and somewhat dyspeptic, and the other two were stoutly built and robust. In all of them the attack commenced with pain in the right inguinal region, at first in paroxysms, at irregular intervals. Subsequently the pain beeame more continued, and was aggravated by walking, by lifting weights, &c. Slight febrile symptoms followed, succeded by loss of appetite, dificulty in walking, and finally, total inability to walk or even to assume an upright or sitting position. The pain increased

in intensity, preventing the patient from sleeping night or day. To these symptyms succeed the formation of a hard unyielding tumor, extremely tender upon the slightest touch. In one it was situated just within the spine of the ilium, outside of the abdominal canal and above the internal inguinal ring. In two cases it was deep in the groin and below the iuternal ring, and in the fourth immediately above the right pyramidalis muscle. At the end of three or four weeks the tumor became more prominent and circumscribed, and shortly afterwards fluctuation could be perceived. In one case, where the abscess was opened by the knife, a copious discharge took place of clear genuine pus, which exhaled a fetid smell. From this circumstance it was inferred that it originated low down in the pelvis near the rectum. In two of the cases an opening formed giving discharge to the matter without artificial aid. Recovery took place in all the cases, but very slowly, the patients remaining for a long time in a state of extreme debility. In the last case which has come under my notice, a tumor of extreme hardness remained for some time, but in the end gradually disappeared. Abdominal distension, but not amounting to tympanitis, and with more or less tenderness, was observed in all the cases, In none was there any reason to suspect a syphilitic taint. Two of the cases were seen by Dr. Wallace in consultation with me. These cases are of great interest, among other reasons because they present many of the marks of hernia, for which they might be mistaken by an inexperienced practitioner. Indeed, in one of them the mistake was actually made by the physician in attendance; and in another, which occurred in a patient eighteen years of age, the symptoms of strangulated hernia were strongly simulated; besides the painful tumor in the groin there were obstinate constipation, vomiting, and a small frequent pulse. Five grains of blue mass and three of extract of hyoscyamus were prescribed; and soon produced a free evacuation of the bowels, which were kept regularly open subsequently by small doses of an infusion of senna with the addition of the sulphate of magnesia.

"It is extremely curious that these cases should have occurred to me in such quick succession, while I had never before met with any precisely similar in the course of my professional career. As regards their treatment, I may state that leeches were used in two of the cases, to combat the inflammation, but in the two others they were not resorted to, as little or no benefit resulted from their use, and they interfered with local applications of greater efficacy; a strong solution of muriate of ammonia in camphor water, applied as a lotion, was found to produce the best effects. In the fourth case an ointment of the iodide of lead was used to promote resolution. Small and large doses of opium were administered by the mouth, to allow the intense pain and suffering which formed so prominent a feature in the disease."—*Philadelphia Med. & Surg. Journal.*

A Singular case of Miscarriage and Retained Placenta. By G. S. Palmer, Gardiner, Me. Communicated for the Boston Medical and Surgical Journal.

On the 15th of April, I was called to visit a lady, whose previous health had been good, and who was the mother of several children; her husband had been absent about two months. She complained of slight pain in the loins, a weight through the hips, and a strange sensation in the vagina, from which, for about four weeks, she had had an occasional sanious discharge, with considerable leucorrhœa. About that time, she had experienced some severe contracting pains, and a small discharge of liquid resembling the "waters" or liquor amnii, and no pain since. The catamenia had been suspended for about four months previous to the pain. On examination, *per vaginam*, I was not a little surprised to find a fœtus of about five months' development, but very small, resting on the perinæum, with its head in the cavity of the uterus. The child was easily removed, and found to be natural in every respect except its size. It was covered with a slimy mucus, instead of the chalky secretion common in most cases, but its skin, and every part of it, was in a perfect state of preservation, and it could have been dead but a few hours. An interesting question here arose, as to when this child was extruded from the womb.

On attempting to remove the placenta, my efforts were all in vain; ergot was administered to no purpose, the walls of the vagina were so rigid that it was impossible to introduce the hand, or to make successful use of placenta forceps, and the umbilicus was accidentally broken near its attachment. A frightful hæmorrhage now ensued, which was soon arrested by the use of the tampon and astringent injections, and the patient, carefully watched, was put upon a sustaining treatment, and the case left to nature.

On the fourth morning, I was informed, by the nurse, that the afterbirth had all come away, and that it had been accidentally thrown aside, although contrary to the strictest orders. I was distrustful of this, knowing how easily she might be deceived by a coagulum; but the hæmorrhage subsiding, and the patient's health improving, I was glad to be relieved from my embarrassment by adopting the same conclusion. A tonic course soon restored the patient to fair health, although the cantamenia did not appear.

On the 12th of August following, I was summoned in haste to see this patient. She was flooding copiously, and having strong contracting pains, which soon expelled from the uterus a roundish substance, about three and a half inches in diameter, which, on examination, proved to consist of the placenta, the membranes, and the rudiments of the cord, all in a perfect state of preservation, surrounded, imbedded and packed in a semi-organized, cartilaginous substance, about three-fourths of an inch in thickness.

Thus did nature *hermetically* seal up, and perfectly protect from decomposition, in a high temperature for four months, a foreign substance, which it could not throw off at the proper time; and when the system returned to a proper state and condition, she relieved herself by expelling the same.

Collodion in Umbilical Hernia.

Dr. Mahy applied collodion in an umbilical hernia of his own child, after having employed unsuccessfully various modes of compression, and obtained a radical cure in four or five weeks. He remarks :

1. The collodion should be free from castor oil or oil of turpentine to facilitate its evaporation, and thus make the parts contract better. 2. It should be painted thickly over the tumor and its circumference to the extent of a five franc piece. 3. Reduction of the hernia is produced by the collodion, not only temporarily but permanently. 4. If the integument around the hernia should become strongly folded or reddened, apply simple ointment, or what is better yet, glycerin. 5. The dressing thus applied should remain seven or eight days. If the collodion peels off, the dressing is renewed, which can be done by the nurse. Washing and bathing does not interfere with the dressing 6. Collodion fulfils every indication, is easily applied, cheap, and causes the child no pain.—*Gaz. Hebd.*, 1856.

Fluid from Hydrocephalus.

Dr. Wm. Detmold exhibited about half a pint of clear, limpid fluid, which he had removed to-day from a child laboring under hydrocephalus. He had frequently operated—in one instance, he was informed the child had recovered; otherwise, he had never cured a single patient by puncture and pressure. His experience was against hoping for good results. Surgeons generally are timid as to the introduction of air—in one of his cases air entered the cavity accidentally—no bad consequences ensued.—*Medical and Surgical Reporter.*

Inunction in Scarlet Fever. Communicated for the Boston Medical and Surgical Journal.

Messrs. Editors :—As scarlet fever is is now prevailing in various parts of the country, I desire to call the attention of the profession again to the value of inunction, as it has been termed, in the treatment of this disease, and for that purpose refer to an article inserted in your Journal of April 24th, 1850. A more extended experience (confirmed, too, by that of many, friends in whose judgment I can confide,) convinces me that all I said in that article is strictly true. The value of the remedy has, I think, been considerably overstated by Dr. Schueeman himself, but this is no reason why an important

addition to our therapeutic resources in the management of this dreaded disease should be neglected.

In severe cases, I have almost invariably found it to give very great relief, in allaying the excessive heat and itching of the skin, and soothing the great nervous irritability of the patient. The skin should be kept *saturated* with the oleaginous application, and if two daily applications are not sufficient for this purpose, it should be used oftener. I have frequently directed its employment five or six times in twenty-four hours. I do not suppose it is at all *essential* that the fat of bacon should always be prescribed, though as it is easy to procure it, it is the article I have generally employed. Some prefer equal parts of mutton tallow and olive oil.

I say nothing on the general treatment of scarlet fever, as the subject has been so often and so amply discussed. Yours, &c.,

Washington, D. C., Dec. 20, 1856. H. Lindsly.

Glycerine and Creosote in Scarlatina.

Messrs. Editors :—I would suggest to the profession the use, externally, of glycerine and creosote in scarlatina. I have used these remedies combined, in a number of cases, with much satisfaction.

To one ounce of glycerine I have added two drops of creosote, and with this rubbed over the entire surface of the body, with the exception of the scalp and face, morning and night. Previous to the inunction, the body has been well sponged with warm water H. W. King, M. D.

Greenville, R. I., December 16, 1856.

Medical Schools in Philadelphia.

In Philadelphia there are said to be no less than nine Medical Schools, five of them being *irregular*. Fifteen hundred students are claimed by the nine collectively, as being in attendance this winter. Of these, the Jefferson College is said to have 500; the old University School, 400; the Pennsylvania College, 150; and the Philadelphia, 100. The residue are scattered among the irregular schools, homœopathic, hydropathic, botanical, eclectic and feminine schools, all of which, it is said, hold charters from the "enlightened" Legislature of Pennsylvania.—*American Medical Gazette.*

NEW PUBLICATIONS.

Essays on the Physiology of the Nervous System, with an Appendix on Hydrophobia. By Benjamin Haskell, of Rockport, Mass. Gloucester, John S. E. Rodgers, Printer—1856—from the author.

The nervous system, whether regarded as the organ of sensation, emotion and intellect, or of locomotion and of all the vital endowments and functional movements of the economy, considered as paramount in importance, to all other parts or constituents of the living organism. So distinguished a place has, indeed, been assigned to it, that its true anatomy and exact function—(its physiology)—has taxed to the utmost the skill and ingenuity of the learned and philosophical in all ages of the world.

Unlike most other organs of the body, a knowledge of its anatomy suggests but little, in reference to its office, and though much has been done to unravel the complexity in which it is involved, and to make obvious the uses it is designed to subserve in the phenomena of life, the whole subject must be looked upon, still, as among the unexplained arcana of animal existence. While this much is true, it is not less true, that, since the announcement of Sir Charles Bell's brilliant discoveries and ingenious deductions, explanatory of the phenomena of nervous action, until quite recently, most of the abstruse questions connected with this branch of physiological research have been accepted as settled. True, other learned investigators, not altogether convinced that the system of Bell covered the whole ground, that it elucidated satisfactorily all

the multipled actions justly attributable to nervous influence, taking his conceded discoveries and his reasonings as their point of departure, have believed they have made additional discoveries, and have not failed to publish the results of their investigations, nor to claim the honor due to discoverers. A greater or less number of these alleged discoveries, in the course of time, have come to be received as important additions to, or exemplifications of the discoveries and doctrines of their distinguished prototype, and, with them, have constituted the sum of what has been admitted as true concerning the great subject of which the writer treats. Nor is it less true, that, in the ever constant restlessness and activity of the professional mind, questions have arisen, in certain quarters, as to the truthfulness of all that is written and received as verity, in reference thereto. Recently, new investigators and bold experimenters have appeared, who claim, not only to have made discoveries in neurological science, but that the results of their researches absolutely contravene most, if not all, that has been conceded to Bell, Hall, and others. Among these, Dowler, of our own country, and Sequard, of France, are foremost. Their deductions, however, are based upon the doctrine of vital endowments and experiments, as are those of their predecessors, and, although their conclusions are remarkably different, their modes of investigation, and the fundamental principles whence they reason, are essentially the same.

The author of the essays before us, ignoring, entirely, the doctrines, both of predecessors and cotemporaries, presents a different system, and proposes to explain the whole catalogue of nervous phenomena, or such as have been attributed to nervous influence, i. e., a subtite fluid generated in nerve tissue or electricity, or some influence or motive excitant, quite analogous, on a basis singularly novel; that of "mechanical agitation in the nerves themselves."

He has convinced himself that all the doctrines founded on the supposed "vital endowments of nerves" and the special powers, predicated of particular nerves, opening up the way, as they do, for the introduction of "phrenological faculties and craniological organs, coupled with all the additions that the

phreno-mesmerisers have made" are "neither more nor less than *materialism.*" Thus convinced, he proposes "to disprove them, by presenting a view of the connection between the mind and the nervous system, founded on the plain and obvious powers and laws of the former, as revealed by consciousness, acting by means of the simple and natural properties which spring from the structure of the latter." Again, he proposes to prove "that, though the theory just mentioned gave a tolerable account of the facts, so unphilosophical is the nature of the assumptions, and so imperfect is the positive evidence brought forward in support of the idea of *vital properties*, that no good reason exists why we should regard them as really existing."

Certainly, these are bold positions, and it requires courage, bordering upon temerity, to enter the lists against such an array of distinguished authority as that, in defiance of which he has thrown down the glove. In reference to the subject, our time will allow us only to say, further, that Dr. H. exhibits throughout the discussion, a thorough acquaintance with the whole literature of the nervous system, and ingenuity and adroitness in wielding the weapons of argumentation. The great importance of the questions in issue will be conceded by all, and the "Essays on the Physiology of the Nervous System," we have no doubt will be read both with pleasure and profit, by those into whose possession they may chance to come.

Hydrophobia is a malady of such fearful import, and, thus far, has held therapeutical measures so completely at defiance, that *any* suggestions, pathological or practical, which do not contravene rational physiology, and that are not barbarous, and, therefore, repugnant to humanity, are entitled to respectful consideration. The papers devoted to this subject evince the characteristic acumen of the author in reasoning on professional topics, and present considerations, in reference to the nature of the disease and its treatment, that seem plausible, and, which, in the absence of established principles and results, are deserving of trial. But while we concede thus much, we confess we have no particular relish for the querulous spirit in which he indulges when speaking of what he has published

touching this fatal disease, and the fact that reporters of cases, subsequently observed, have not seen fit to submit his proposed treatment to the test of experiment. He remarks, "I endeavored to call attention to the mucous membrane of the mouth and throat, as the chief source of the morbid phenomena in this disease. Since that time, several cases have been published, but, in no one, is there reason to believe, were the suggestions put forth by me, thought sufficiently worthy of notice to influence the treatment in the least. It was always found best to pilot the *patient* over the road to *sure destruction*, rather than to deviate from the beaten track." Now, it is cheerfully granted, that any physician has an undoubted right to publish his deductions, founded on experience, or his theories, even, but we deny his prerogative, whatever may be his position, to complain, much less to treat his brethren impertinently because they choose to be guided by their own judgment, rather than adopt *his* ipse dixit. K.

The Transaciions of the American Medical Association, instituted in 1847—*Vol. IX. Philadelphia. Printed for the Association by T. K. & P. G. Collins*, 1856.

In this massive volume, of more than nine hundred pages, the Medical Profession of our country is furnished with an aggregate of the wisdom and doings of this great national fraternity, as elaborated during the year of 1855, and fully brought to light, in the course of its late session, in this city. In the future history of American Medical literature, it will be recognized as an enduring monument of the enterprise and intelligence of the founders of the Association, and with its fellows, of a former date, as well as those, that are to come after it, as a monument, no less enduring, of the varied and extended learning, and of the real working proclivities of its members. Irrespective of the ordinary formal records of transactions—such as are inseparable from the organization and orderly business operations of all deliberative bodies, and the annual ad-

dress of the President, its pages are laden with a vast amount of professional lore—excursive research and practical deduction, a great share of which is entitled to rank among the most finished productions of the age. Necessarily, great diversity of capacity and attainments being laid under contribution, in the composition of the numerous reports, which constitute the great body of the book, they offer no small degree of diversity, as regards copiousness of research, logical arrangement, and intrinsic merit. Should the institution continue in existence, and, in the future, be characterized by the same degree industry, which has marked its history, thus far, it must become the great, *American Repository* of progressive medicine.

Issued annually, and each committee or contributor having an entire year devoted to his theme, he must be singularly wanting, not only in an earnest, producing love of his science, but in self-regard, if he do not make available to the elucidation of his topic, the researches, both of his prdecessors and his cotemporaries, and the work must be anamalous, indeed, if it do not present a faithful, annual record of medical investigation and improvement. Thus, it cannot fail to be, to the medical men of the future—to the great science of healing—what the massive columns in architecture are, to the mighty edifice they sustain. Though the various papers on subjects immediately connected with medicine and surgery, exhibit much diversity, both in style and profundity of research, all are highly meritorious and may be consulted, with advantage, as well, by the man of experience and accumulated wisdom, as, by the junior members of the profession.

Including the annual address, the work consists of twenty papers, having the form of reports, besides a record of the daily tranactions, Treasurer's Report, a statement of the plan of organization, and a catalogue of the names of members, and their respective places of residence. Many of these possess exalted merit, and must be regarded as essentially valuable, in all coming time. That by Professor F. H. Hamilton, being a continuation of his report on fractures and dislocations, evinces untiring perseverance, methodical arrangement, profound and earnest research, and much practical observation.

The whole has swollen to the dimensions of an elaborate treaties, and it gives us great pleasure to know that the author proposes to offer his labors, in this important field of practical research, at no distant period, to his brethren, in a distinct volume. It cannot be otherwise than acceptable to the profession, as it will afford reliable information, on many points not readily found, scattered, as they are, over the entire face of surgical science. Although no task could afford us greater pleasure, and although we feel it incumbent upon us to do so, yet our limits will not allow us to speak specially, at this time, of all the papers, of which the book is constituted. With the writings of Dr. Blatchford and Professor Gross, we have been familiar, heretofore, and it is not too much to say that their respective productions—that of the former being a "resumè of the literature" of hydropholia; of the latter, a consideration of "the causes which impede the progress of American Medical Literature"—sustain fully the high character, we believe to be generally accorded to these gentlemen.

We can only, further, mention the titles of the respective Reports, not above referred to, and their authors—they are as follows: On Medical Literature, by Dr. Breckenridge; on the Milk of the Human Female, as modified by Mensturation and Pregnancy, by Professor Davis; on the Sanitary Police of Cities, by Dr. Newman; on Cholera Infantum, by Dr. Fuller; on Topical Applications of Nitrate of Silver to the Throat, by Professor Green; on Medical Education, by Dr. Anderson; on Yellow Fever in Charleston, by Dr. Cain; on the Medical Topography of the Eastern Shore of Maryland, by Dr. Worth; on the Epidemics of Louisiana, Mississippi, Arkansas, and Texas, by Dr. Fenner; on the Meteorology, Mortality and Sanitary Condition of New Orleans for 1854–5, by Dr. Barstow; on the Yellow Fever of Norfolk and Portsmouth, Va., in 1855, by Dr. Fenner; on Strychnine, by Dr. Steiner; on a Uniform System of Registration of Births, Marriages, and Deaths, by Dr. Palmer; to all of which, succeeds, the prize essay of Dr. Hartshorn, on the Arterial Circulation.

As regards the execution of the volume, we are pleased to say, it reflects credit, both upon the Committee who had it in charge, and upon the Publishers. K.

The Microscope and its Revelations, by Wm. B. Carpenter, M. D. &c. &c., London, with an appendix, containing the application of the Microscope to Clinical Medicine, &c., by Francis Gurney Smith, M. D., Philadelphia. Blanchard & Lee, publishers.

No one familiar with the various works by this author, expects to find anything *new* in them, and the work now before us offers no exception to the rule. This gentleman may be considered as a sort of *wholesale plagiarist*—he robs every body. Whenever he finds anything to suit his purpose, he instantly "annexes" it, with the utmost *sang froid*—with most imblushing impudence.

He reminds us of an anecdote of the late celebrated Crockford, for many years the proprietor of the most splendid and notorious "Hell" in London—under the guise however of a "Club House." A young man had just attained his majority and inherited a very large fortune. Crockford tempted him to his "den" where in two or three nights he succeeded in stripping him of every coin. Shortly after the young man's father [to whom the circumstance of his son's ruin became known] met Crockford in the street, and shaking his cane in C.'s face said "you rascal, you have ruined my son." Crockford looked him placidly in the face but said nothing, whereupon the father repeated "I say you have *ruined* him, utterly, thoroughly, hopelessly *r-u-i-n-e-d*, him." "Yes" said Crockford, "I know it, I ruin a man every day, *I live by it.*" This appears to be Dr. Carpenter's case, he *lives by it.* There seems to be something morally wrong about *book-makers*—they [for their own reasons] cannot afford to be honest.

John Thomas Quekett, was engaged *to make a book*—of course he plundered people right and left.

Dr. Carpenter *makes* books on all subjects—his plagiarisms are constant therefore.

This subject is one in which we feel a deep interest, inasmuch as the Doctor has not scrupled to commit bare-faced, and scandelous plagiarisms on us.

His predecessor, [J. T. Quekett] did precisely the same thing in the first edition of his "Practical Treatise on the use of the Microscope" but made amends, by due acknowledgment in the *second* edition. Acquainted, as we are with the literature of the

subject, we necessarily detect other authorities who have as much right to complain as ourself. How far this system of *constant peculation* and *robbery* succeds, the Doctor must be the better judge, but if report speak truly it is not a *very thriving* affair. Any way, as he is yet young [under 40] there is some hope that he may abandon this objectionable course of life, and seek to get his living like an honest, honorable man.

In speaking of "Forceps" he says "one of the most convenient forms is represented in fig, 52, of something less than the actual size. These forceps were invented by ourself, and rewarded by the Society of Arts, in the year 1855, with their silver medal given for a "microscope and instruments for the dissection of Insects" and figured and described in their Journal for that year.

In page 210 he describes the cement we invented for wet preparations, together with our "mounting plate"—of course, without acknowledgement.

From page 234 to 242 is mainly stolen from ourself, and contains a description of our cells, the method of mounting preparations in them &c., for which we received the large ($100) gold medal of the Society of Arts, in the year 1842, and subsequently received from the late Sir Robert Peel, $750 as an additional reward.

We denounce these, therefore, as unusually bare-faced frauds, such as none but he who *"lives by it,"* would attempt to practice.

It would be easy to shew that the book has *"been made to order"* on this principle, but which at the same time, no way impairs its usefulness.

The public, however, care little where it comes from, so they get it, and are content to pay a premium for dishonesty. The general arrangement of the book *is good*, and the illustrations [with some exceptions] good also. The only portion of the work the Doctor can really claim as his own is the *introduction*, this is very clever, most excellent.

As this book so closely follows Quekett's, we think Dr. Carpenter might have omitted the description of the mechanical part, how to use the instrument, preparation making &c. It

appears to us to extend the book, and increase its cost unnecessarily, especially as all who are interesed in the microscope, already possess Quekett's Practical Treatise.

The appendix by Dr. F. G. Smith, will be found useful in this country, where there is a deficiency of information on the subject, successfully treated by him.

The general plan of the book differs widely from Quekett, and is greatly to be preferred. On the whole, we feel constrained to speak of it as the *best work extant on the subject*, and one that will undoubtedly supercede the books that have preceded it.

For sale by Raymond & Selleck. H. G.

EDITORIAL AND MISCELLANY.

The Medical Independent—Its Origin, Success, and Position.

One year has now elapsed since we engaged in the project of offering to the profession of our State a new Medical Journal, and, inasmuch as many of our readers are not aware of the circumstances, which led to the conviction that such an enterprise would not only be acceptable, but was actually needed, we shall here collate somewhat in detail the facts, objects and incentives that formed the basis of our undertaking. In doing this, justice to ourselves compels us to be more explicit, and dwell with emphasis upon facts that involve personal allusions, which we would prefer to omit, and leave on the record of the past, among things forgotten.

But the January number of the Peninsular Journal, through one of its senior editors, has arraigned us for the crime of "*ingratitude,*" and in a sycophantic style of sophistry, makes a

pathetic appeal to our cotemporaries, and the whole medical profession, praying for a verdict that will attach the penalty of *total annihilation.!*

In the four pages which "*The Citizen of Illinois*" has devoted to us and our labors, we find abundant provocation, and sufficient reason for transcending the bounds of ordinary controversy, and dealing with personalities just so far as they are involved in the points at issue.

Having been a resident of this city for nearly ten years, we are familiar with many facts connected with the origin of the *Peninsular Journal*, and some of them will be pertinent to our present purpose.

Where the thought, or expression, which gave existence to that Journal was first conceived, we do not pretend to know; but it appeared about four years ago, under the supervision of a student of its present senior editor, whose *nom de plume*, it will be remembered, was "*Corporal Bullhead.*" It was christened as the offspring of the Medical Faculty of the University of Michigan, and obtained subscribers on the strength of that announcement. The members of the Faculty were to be its collaborators, and the Journal, of course, the organ of the school. But it was soon *practically* disowned and repudiated by that body. At the end of one year a change was wrought, in which A. B. P.—the citizen from Illinois—was associated with the "*Corporal,*" as co-editor. Under this arrangement, it enjoyed a feeble existence, up to the time of the last editorial change, which occurred a little more than one year since. From the first, it was regarded by a majority of the profession of this city, as the mouth-piece of a faction—a clique—whose head was the present senior editor. The last editorial mutation rendered it the more obnoxious, since it elevated to the position of *Editor*, an *illiterate.* In proof of this assertion, we need only point to his contributions, which evince not only ignorance of the facts and principles of medical science, but a sad deficiency in elementary education. Notwithstanding these facts, however, desirous to contribute what we could to the maintenance of a Journal in our own State, *we* complied with the solicitations of the editors, and offered a contribution But

what was its fate? *Rejected* by the *senior* editor, and for reasons, which were considered, by all who were familliar with the facts, as paltry, and unworthy of a Journal professedly independent. It is sufficient to say that the paper was afterwards published and endorsed by the *Buffalo Medical Journal.*

Dr. Goadby also offered a series of articles upon subjects connected with the Microscope and its revelations, asking no remuneration for his labors, though they were the results of thirty years observation. They, too, were rejected, on the plea of *poverty.* The Journal was not supporting itself, and the editors could not afford to furnish a few wood-cut illustrations, even though, by so doing, they would add ten or fifteen pages monthly of scientific *original* matter.

Here, then, is a truthful exposition of the facts in the case, as they then existed. A Journal in the field *having four editors —repudiated by its godfathers—not paying expenses after three years existence,* and what was worse than all else, the representative of a clique, rather than the exponent of the interests of the profession as a whole.

Now, was the majority of the faculty of this city and State, meekly to submit and bow down to a self-constituted guardian, or give their support and have access to an independent organ of a progressive medical science? The answer to this question will be found in what followed.

After consultation with several of our leading physicians, and obtaining reliable assurances of côoperation from various parts of the State, we were advised and urged to engage at once, in the publication of a new Journal. We therefore reluctantly entered upon the work, and issued our first number in March. Now, at the end of one year, we can point to a subscription list that, enrolls the names of at least two-thirds of the members of the profession in this State, and to subscribers in nine different States. These facts considered, we ask "The *Citizen* of Illinois" whether another Journal "*was needed* in this State?"

But what course did the old conservative monopoly pursue in relation to the new Journal? They waited impatiently for

some provocative that they might indulge their polemical propensities, and thus commence a war of extermination. They permitted us to go along unmolested, until July, when, not finding anything better, they turned back to our April number, for the pretext of an onslaught. There, was found a wood-cut, illustrating a mere freak of nature, with a simple history of facts, as they were furnished to our senior, Dr. Goadby. He offered it for nothing more than a curiosity, exhibiting an interesting fact in natural history. But the erudite senior of the "*Peninsular*," with credulity enough to admit that nature might, by some mishap, provide a Fœtus with two heads—a dog with six legs—or a calf with only three, yet could not be made to believe that by a distortion of the spine the hind legs of a mink *could be* inverted. Now all we have to say further with regard to this case, is, that an examination of the skin, which is in our possession, will satisfy any man, capable of judging, that the facts *were as represented*. But the "*urbane*" senior editor, who, if we could believe the statement of his junior commentator, is *learned* in Natural History, could not see how it was possible for dame Nature to be guilty of such an indiscretion. If his facetious attempt at wit in the criticism, had been characterized by becoming dignity, confining his strictures to the mere representation of facts irrespective of the man, they would never have received at our hands the kind of treatment which was administered, and which we still think was deserved—the dolorous complainings of A. B. P. to the contrary, notwithstanding. But he made it the text of a *malignant personal attack*, charging Dr. Goadby with ignorance of Natural History, simply because he was not sufficiently *pedantic* to flourish quotations from Cuvier, and recount all the technicalities of classification.

Now, what is the most reasonable supposition as regards the motives that prompted the great *progenitor* (?) of the profession in Michigan to attack a man, whom he had acknowledged to be superior as a naturalist, and to have but few, if any equals as a practical microscopist ? Here was a rival Journal that promised, with the contributions of Dr. Goadby, to succeed ; jealousy, therefore, prompted the effort to forestall public opinion with

regard to the character and attainments of our senior editor; aiming the blow at what they considered our tower of strength. Who, then, with the facts before them, can doubt for a moment the motives and object of the attack? Our own interests, then, were involved; hence the provocation to treat the matter with all the latitude which truth and our convictions of justice on the one hand, and of merited censure on the other, imperatively demanded.

But let us turn over this great sin of ingratitude, which has been committed, and if we do not succeed in appeasing the wrath of the Gods, who are so greatly offended, we shall, at least, leave on record, evidence of the honesty of our intentions.

In speaking of what we have regarded as gross evils in the profession, we have treated them on general principles, finding our illustrations in examples that were pertinent and familiar to many of our readers. The Solon from Illinois has applied some of our *garments* to his senior associate, and some others he might have applied with as much propriety to one of his juniors.

Let us see how far we can admit the arrogant assumptions of A. B. P. in his extravagant laudation of his ideal magnate. He tells us that for thirty years he has been identified with the profession of America, and that he has served for years in the United States Army. We grant all this, and can point to many such examples; but it is known, nevertheless, that the time has been, and that, too, within the last thirty years, when men of very superficial attainments could pass the examining board and obtain army distinction. We could ask no better proof of this assertion than the fact so emphatically alleged that the senior editor of the *Peninsular Journal* was "*President of the examining board.*" He tells us, further, that he has risen to the highest honor which the representatives of the profession of the country can confer—the Presidency of the American Medical Association—and that, too, by the absolute unanimity of the nominating committee, and the association.

His election to that office was the result of a precedent, which is now denounced by a large proportion of the medical press.

It was well understood that if the association could be induced to hold a session in this city, by established usage, the oldest among the prominent resident members of the association would be elected President. It was, therefore, a foregone conclusion. If there had been no existing precedent equal in force to an organic law, the result might not have been so flattering to the vanity of one so deeply interested.

But we will admit that he "has been seen in the streets of his adopted city, more or less, for twenty years—that he is always the same dignified, urbane gentleman—that his form is familiar to all," (who know him); and we will admit just as much more of this kind of panegyric as may be necessary to complete a *good advertisement ;* but, after all that, we must be permitted to ask what he has contributed to the medical profession, which, when compared to the claims of the *truly great* men of this country, is at all commensurate with the honors he has received? Has he distinguished himself as an author ? Point us to the productions of his pen that might not be blotted from the medical literature of this country without defacing the record, or doing violence to the claims of posterity. Do you cite us to his elaborate effort before the American Medical Association as Chairman of a Committee on Medical Education ? Would not the author himself be glad to abstract it from the volume long enough to change his recorded views upon the subject of clinical and hospital instruction, bringing them up to the present standard of practical teaching ? If he would not, he deserves the *pity* of the whole profession, rather than censure.

Point us to another production that he can claim as a monumental achievement, worthy to live after him ; for charity, and our veneration for grey hairs, would forbid that we should take away one laurel that has been justly won. Has he distinguished himself as a teacher ? If so, where, and when ?

It requires no argument to prove that any man under fortunate circumstances—often from mere accident—may obtain *notoriety* and reputation, in the highest degree, and yet possess no exalted and commanding merit—no overshadowing intrinsic worth.

A. B. P. need not tell *us* that this so-called "Father of the

Profession in Michigan" is one of the oldest inhabitants in this city—that he has been identified with the progress and improvements of the city, politically and socially. But what has he done for the *profession* of the city? We may answer, without fear of contradiction, that he has done much *to engender hostilities*, and, instead of uniting the profession, has fostered and cultivated clique combinations. He has long been physician and surgeon to our only Hospital, having the supervision of a hundred beds, and what advantage has the profession derived from all this? Turn back to the Hospital reports, as they appeared in the *Peninsular Journal*, and examine the medical *treatment*. Let us detail one example: A patient was under treatment for Ascites, and the honored senior proposed the use of Iodine injections into the peritoneal sac. It was done, and, though the patient died, the case was reported, and the treatment practically recommended in such cases. Shortly after, a prominent physician of Marshall, having a case of the kind under treatment, was induced by that report to try the same remedy. The result was almost *immediately* fatal; *the patient died of peritoneal inflammation.*

This is one of many instances that *can be cited* to exhibit the culpability—not to say *incompetency*—of his hospital treatment.

Why has he not given an official monthly report of mortality, as is done in other institutions of the kind—so that our city and county—paying $5,000 a year towards its support—may know whether the *majority* of the poor who are sent there, *go out dead, or alive?* This is a practical question, and one in which the tax-payers of this city have an interest, to say nothing of the claims of philanthropy and benevolence.

A Hospital that might have been made a popular institution, and contributed to the advantages of the whole profession, has been monopolized by one man. In the Hospitals of other cities a single ward or division is considered as enough for one *ordinary* physician; quite as much as he can attend with justice to his patients and profit to himself. But here is a man, whose reputation is chiefly dependent upon the fact of his once having been in the Army, who can attend to the duties of *all the departments*, and an old patronage—which A. B. P. informs us,

has carried him into almost every cottage and palace in the city, besides. Show us another such example among the living, or even among the historic dead !

But this is not all ; as soon as a Government Hospital was provided in our city, this man of such omnipotent capacity, *by a sudden change of politics*, became a candidate for Surgeon to the Marines ! Now, the probability is, that if there should be no more Hospitals within our borders, like Alexander, he will have to "weep because there are no more worlds to conquer." He is quoted as being the Father of the Medical Department of our State University also, and we award to him the credit of having given *slight official* aid to that branch ; but how much more honor would he have achieved if he had contributed his influence toward the establishment of a State General Hospital—so much needed and *so indispensable to the perfection of the Medical Department of our University ?* If, instead of opposing the removal of that branch to this city, where clinical and hospital advantages could be made available to the medical student, he had labored as zealously to accomplish it ?

The selfish, illiberal policy which has characterized his public acts, as far as they have been identified with the interests of the profession, is unworthy of a man whom A. B. P. would have us regard as the " Pater Noster" of the medical profession in Michigan.

These, then, are *some* of the facts that have tempted us to commit the great " sin of ingratitude !"—and so long as our own convictions of *right* and *wrong*, as far as they have had expression, are supported by a majority of the medical profession of our city and State, we shall claim and make available the prerogatives of an independent Journal.

Our magnanimity prompts us, without consulting A. B. P., to make a gratuitous insertion of his lacrymose appeal to the profession, only taking the liberty of substituting a few *italics.*

"In view of these facts we *appeal* to the *honorable* portion of the profession of this State, and of *the country*—to those who have known and *honored* the principle subject of these attacks and this prosecution, whether they can encourage or *tolerate* those who are engaged in or *approve* of this *pursuit ?* Shal the medical press be silent where its freedom is thus attempted to be

invaded? Shall one of the first and oldest, *most respected* and *honored* of the laborious members of the profession in the west, be thus maligned and pursued by men, *some* of whom are mere *striplings in age* and experience in the profession, and *all are but of yesterday among us*, and the indignation of *honest* men not find emphatic expression?"

If A. B. P. should ever have occasion to elaborate another such appeal, he must allow us to suggest the fact that the document would be stronger, and more *affecting*, if he would preserve dignity and keep within the bounds of *truth*.

He asserts that we—editors—are youthful as regards age and experience in the profession; at the same time he knows that two of our number are at least 15 *or* 20 *years* his senior, to say nothing of thirty years professional experience. He says, moreover, that "all are but of yesterday among us;" while the *truth* is that the writer of this article, has been a resident of this city nearly *ten years*. If the distinguished "Citizen from Illinois" had *ever* been a *resident* "*among us*," he would probably have saved an exposure, either of his *ignorance of facts*, or his propensity *to pervert truth*. (We hope *this* is not *ingratitude*.)

We fully endorse the sentiment which he has expressed in the following lines: "It is always unpleasant to allude in a public manner to the private affairs of any parties."

But when *arrogance*, *assumption* and *insufferable egotism* become *personified* and are offered as the embodiments of *erudition*, and zealous devotion to the interests of medical science, they are the most formidable barriers to progress. Hence they become professional evils, and however much we, too, may regret the necessity of personal allusions, we are as yet unacquainted with a better remedy.

Is the medical profession of Michigan willing to entrust the interests of its contribution, to the medical literature of this country, to men who are unable to distinguish between an *ovary* and a diseased *lymphatic gland?*—men that attempt to palm off a new *discovery* (!) in the phenomena of Hernia, without a knowledge of the subject, as treated in our text-books, and taught in our schools? Our steady and rapidly increasing subscription list answers emphatically *No!*

A. B. P. may charge us with ingratitude, and fill up his pages with *fulsome praise* of his senior editorial associate, but we shall continue, as we have begun, to expose quackery *in the profession*, as well as out of it. L. G. R.

Close of Second Volume.

With the present number, we close our second volume, and while congratulating ourselves upon the success which has rewarded our labors, we should not be true to the promptings of our nature, without giving expression to emotions of gratitude for the interest and cooperation of those who have contributed to the establishment and support of our enterprise.

We commenced the publication of the "*Independent*," fully aware of circumstances and contingencies that would naturally suggest to the minds of many, reasonable doubts of our success; but from *our* stand-point of view, we could not hesitate to believe that a promising field was open for such a project. We can now point to the records of our subscription, and to the names of contributors, as worthy testimonials of the truthfulness of our convictions. In view of what we have accomplished, we shall enter upon our second year full of hope, and with that kind of encouragement so indispensable to the faithful and zealous prosecution of a work thus auspiciously begun. May we not also claim the assurance that those who have so cheerfully extended to us the hand of fellowship—notwithstanding the imperfections incident to the inception of such a work—will continue their cordial support in the conduct of a Journal that will be an honor to our State and worthy of the medical literature of our country.

We are happy to announce that we are almost daily adding to our list the names of those who are among the first in the profession of this State as successful practitioners and studious observers. From them we shall receive reports of cases, and other contributions to our department of original communications. We earnestly hope that every subscriber will acknowledge and fully appreciate his relation to the profession as a whole, and though isolated, and perhaps obscure in his field of labor, will remember that he *may* gather from his experience even a single fact that will add a valuable contribution to medical science.

Dr. Goadby's article on the "Links connecting the Vegetable and Animal Kingdoms," which commenced in our first num-

ber, and has been continued up to the present time, will be concluded in our April or May number. He will then offer a series of illustrated papers upon Histology.

In consequence of unavoidable delay in getting wood blocks from New York for our engraver, we were obliged to omit from our present number Dr. Goadby's continued articles upon "The Structure and Functions of Insects," and "The Art of Making Injections." They will appear again in our next issue, and we shall endeavor to provide against a like contingency for the future. R.

Fifth Annual Meeting of the Michigan State Medical Society.

At the last annual meeting of the Michigan State Medical Society, it was

Resolved, That the next annual meeting be held in the College building, at Ann Arbor, on the day preceding Commencement.

In accordance with which resolution, the next (5th) annual meeting will be held at the above mentioned place, on Tuesday morning, March 24, at 10 o'clock.

E. P. CHRISTIAN, Secretary.

We cheerfully insert the above notice, which was handed to us by the Secretary, for publication, but shall improve this opportunity of appending a few remarks which we have intended to make before.

There is no object connected with the medical profession of this State more important—none which appeals so strongly to every individual member who desires to see the character of the profession elevated, its interests protected and promoted, as the organization of the *State Medical Society*. But to secure its successful operation, some radical changes in its administration are imperatively demanded. For example: It has adopted the *Peninsular Journal* as its organ—but how much has that publication done towards arousing the interest and energies of the profession in its behalf, or in any way promoted its interests?

How many more were present at the last meeting than the year previous ?

We are asked to go there and pay our initiation fee, and annual tax, and all for what ? The support of the *Peninsular Journal.* Now, we have no objection to all this, if it can be shown that the society *needs* an *organ.* We would cheerfully publish its proceedings *gratis,* and set apart the sum that annually accumulates for a *worthier* object. But if A. B. P. is present to make his annual *appeal* to the sympathies of the members, we, of course, can hope for no change of steryotyped rules.

Back Numbers.

In answer to numerous calls for back numbers, we regret that the facts in the case compel us to ask our friends to give us a little time to reprint the April and December numbers. There seems to have been a greater demand for those numbers, probably on account of the *natural curiosities* which they contained—one in Natural History, *the other in Medical Literature.* We shall have a supply soon.

Erratum.

In No. 5, Article V., page 280, in fourth line of quotation from Burns, for *revenge,* read *vengeance.*

In Article V., page 282, in eleventh line from the bottom, for *Ethiopia,* read *Esthonia.*

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